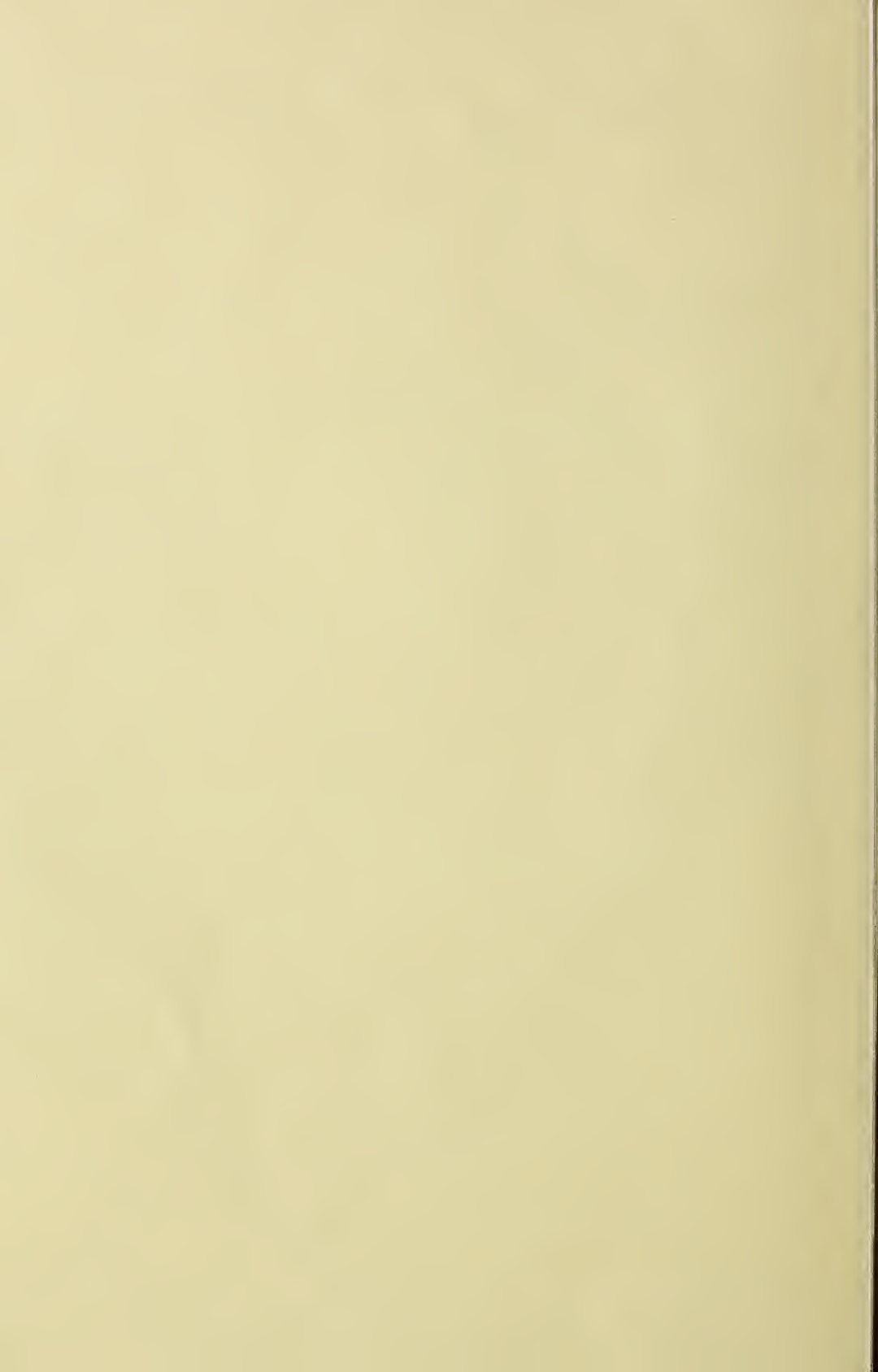


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THE

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DEVOTED TO

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THE CROPS AND FUTURE PRICES.

The latest returns to the Agricultural Bureau at Washington, indicate that the aggregate yield of wheat, this season, will be forty-eight millions of bushels less than it was last year. The Commissioner acknowledges that the estimate is in some respects conjectural, and that the actual yield can only positively be known when the crop is harvested and thrashed. The principal States that yield rather more than an average crop are those south of the Potomac—Texas excepted. Every where else the crop is short, in some instances falling off quite heavily. On the other hand, the corn crop is better than last year, in the West, with a larger area under cultivation. At the South, however, less corn has been grown and more cotton, of which there is at present the promise of a good yield. Indeed, the estimated increase in the yield of cotton is put at not less than half a million of bales. Of oats a decrease is indicated in some of the States, but taking the average, the returns show a probable aggregate increase of about five per cent.

All these, of course, are rough calculations, but imperfect as the report is it makes it tolerably certain that the average depreciation in the yield of wheat is not less than thirteen per cent. and that it may be more.

These facts will serve in some measure as a guide in respect to future prices, and from them and from the condition of affairs abroad, we reach the conclusion that prices will be well maintained.

It is now admitted that the yield of wheat in England will fall considerably below the usual average. In France the drought has proved far more disastrous to the wheat crop, and in Germany similar complaints are made, although the decrease in the yield will not be so great as in France.

In the Baltic provinces the wheat crop turns out remarkably well, indeed much better than last year; but the surplus will be by no means sufficient to make up for the deficiency in England and on the Continent, and there are circumstances which may make its transportation to a market very difficult.

But the great element which must enter into any

calculation of future prices as respects wheat, is the war which has broken out between France and Prussia. In consequence of this war, two millions of men are now under arms or will be so shortly. A large proportion of this enormous force has been drawn from the agricultural population of the two countries, and from producers must be classed as consumers. Immense supplies will have to be drawn for their use from some source, and a further large allowance must be made for the waste of corn. In addition to this, all the other Continental nations are arming, although they disclaim, at present, any intention of joining in the conflict. Their determination to remain neutral may however, be suddenly changed by the course of events. If Belgium is invaded she will join with the other belligerents in punishing the aggressor. So also with Holland, under similar circumstances. So too with Switzerland. But there are other powers whose attitude is uncertain. Russia may throw her weight into the scale, in support of Prussia, to avenge on France the war in the Crimea. In that case Austria will support France. Italy, who owes so much to the latter, will do the same—and Denmark is even now eager to join in the struggle on the same side—all these eventualities may occur, and the ultimate result would be, a general European war.

But assuming that France and Prussia are left to fight out their battle without aid from any outside source, still no one can tell how long the war between them may last. They are equally matched. Each of the combatants can put or has already put nearly a million of men under arms. The people of both countries are equally enthusiastic in support of the war, and each bent upon conquering territory of the other, and resolved to test, by the arbitrament of the sword, which of the two shall hereafter be recognized as the controlling power on the Continent.

Into the question of the right or wrong of the quarrel we do not propose to enter, nor is this a matter of any consequence so far as it relates to the point which we are endeavoring to illustrate. That

point is: what effect will this war have upon the price of our breadstuffs. We hold that Cotton will decline in price, but that wheat and flour must advance; that they certainly cannot fall, for some time, under the present price, and that the rate of advance would be much more rapid, if we had our old facilities for ocean transportation, and were not dependent on foreign vessels.

CROP PROSPECTS.

We subjoin the following from the Monthly Report of the Department of Agriculture, issued on the 21st July last, showing the condition of the crops throughout the country:—

WHEAT.—According to returns the great wheat-growing districts all show a reduction in condition, rendering it certain that the crop of the year will be materially less than that of 1869. Future reports of condition at and after harvesting are still elements of the ultimate estimate, but the average depreciation of 13 per cent., and the diminution in breadth of about 6 per cent., would make the present estimate about 210,000,000 bushels, the decrease being at least 48,000,000 bushels.

Some unevenness of yield appears in Pennsylvania; one-third of the crop in Union county has been destroyed by hail; rust and weevil were injurious in Montgomery; storms beat down the grain in Lehigh; the weevil did some damage in Luzerne. Late wheat was more injured by heavy rains than that which was sown early.

From Delaware and Maryland serious complaints of winter-killing were received, followed by fine growth in April and May, and the prevalence of rust, scab and blight in June, after a long season of east winds and foggy or rainy weather.

Late wheat was injured slightly by heavy rains, and in places by rust in Virginia and the Carolinas, but the crop as a whole is excellent in quality and large in quantity. In Georgia this crop is regarded as one of the best ever known; in Clayton county, the best harvested in twenty years; in Columbia, the best raised in ten years; in Newton, "equally to any crop before grown." Alabama was equally fortunate; and a fair yield on a narrow breadth sown was obtained in Mississippi. Wheat sustained injury in Texas from wet weather in the Red river valley, and in more southern counties from drought. A large yield is reported in many portions of Kentucky.

CORN.—The increase in the breadth of corn is greater than the decrease in acreage of wheat. It may be placed at five per cent., or about 1,750,000 acres.

COTTON.—The increase of acreage of cotton is indicated by the returns of county correspondents,

averages 12 per cent., and aggregates nearly a million of acres. It is almost literally true that "the people are devoting all their energies to the culture of cotton." The condition of the crop is so far favorable for a good yield.

Neither the caterpillar nor boll-worm has appeared, and there are few drawbacks which a few weeks of favorable weather cannot repair. With an average season the present acreage should give nearly three and a half millions of bales; with one of the extraordinary length of the last, the product would be little short of four millions—which was of so remarkable a character for continued growth and late picking that our October estimate, a reasonable one at the time, of 2,700,000 bales, was advanced at the close of the season to 3,000,000.

OATS.—This crop is looking better than would be expected in view of the heat and drought of the season. Its condition is a full average in about half the States. In New York, South Carolina, Georgia, Florida, Texas and all the Western States the deficit ranges from 9 to 23 per cent.

TOBACCO.—There is an increase of acreage in Virginia and Kentucky. Our returns show an aggregate increase of about 5 per cent. A slight decrease is indicated in Ohio, Indiana and Missouri. The appearance of the crop is superior in Kentucky, Virginia, North Carolina, and Georgia. Drought has injured it on the north side of the Ohio.

FRUITS.—The prospect for apples is unusually good from Maine to Georgia, except in Pennsylvania and Maryland; and Tennessee is the only interior State which can claim an average. In Pennsylvania much complaint is made of premature falling from the trees. Peaches are somewhat less abundant than apples. The prospect in New Jersey is returned at 2 per cent. above an average. Delaware will not have a full yield. Kent county reports but half a crop.

SPECIAL MANURES.—I know there are many who have no belief in any special manures, and can only believe in renewing land and stimulating crops by the use of barn-manures; but, having practiced the use of salt sown in late winter or before vegetation commences, then follow with bone meal a week or so thereafter finishing with gypsum as soon as the foliage of trees is half grown, or the corn or potatoes are two inches out of ground, and found the practice a profitable one, I cannot avoid advising it to others.

In the use of the bone meal in the production of garden vegetables—potatoes, corn, &c.—I have found application in the hill or drill to produce the most apparent and satisfactory results. When sowing plaster I always try to do it just at night when the dew is falling, or at some time when there is a little moisture, like a fog, in the atmosphere, or when the foliage is in some way charged with moisture.—FRANK AMOR.

THE FRUIT SEASON---SMALL FRUITS.

The Commissioner of Agriculture reports that the apple prospect is unusually good from Maine to Georgia, except in Pennsylvania and Maryland; that in two or three States there will be fair crops of peaches, but only in New Jersey a full average; and that generally in the Middle States both peaches and apples are badly infested with insects. The damages done by the worm to the peach, and by caterpillars and other insects to the apple, may be traced to our unusually open winter. But the prospects for peaches are evidently not cheering. Somehow or other, we have either lost the art of growing peaches to perfection, or the soil has become deteriorated in which they are grown, or the seasons have been unfavorable. All of these causes may have combined to deteriorate this fine fruit. There is also another cause which we fear must also be taken into account. We have been breeding in and in too much. Instead of growing peaches from the seed, and selecting from these the finest fruit for reproduction, we have contented ourselves with budding our seedlings year after year from old standard trees, without regard to the health of those trees or to the causes which may have injured their vitality. It is a practice which we think has been carried too far, and if we desire good fruit we must go back to first principles. It is the case with respect to the finer sorts of apples. Many of them have degenerated, from the constant repetition of the system of grafting. Where now do we find choice specimens of that once superb and aromatic apple, the Golden Pippin? What has become of the old Redstreak, the finest cider apple in the world? And what of the firm, delicious Rambo? It is true that other choice varieties have taken, in some measure, their place, but there must have been causes for the deterioration and almost extinction of the old varieties of the apple which were once held in such high esteem. We hold that the continuous planting of young orchards for more than a century with grafted trees has done the work. For many years Ohio was famous for its apples, and one of the reasons why it was so famous was that no grafting, of any consequence, was done by the earlier settlers, nearly all the trees being seedlings. These and a virgin soil gave that fine quality to the apples of that region which rendered them among the choicest of their kind. In the Middle States, and certainly south of New York, the apple has sadly degenerated of late years. The great orchards of Central Pennsylvania are dying out. In the best of years a large proportion of the fruit they bear either falls before it is ripe, or is otherwise imperfect. It is the same in Maryland. Except in rare instances, our apple orchards turn out badly. The pear, as a general thing, succeeds

even worse than the apple. The plum can scarcely be said to succeed at all, whilst we rarely find now in our market such noble specimens of the peach as at one time were the product of the Cromwell and the Somerville, and other large and well cultivated orchards.

Of small fruits the product of the strawberry has been greatly increased. The new varieties grown from seedlings also furnish berries of extraordinary size, though not of a richer flavor than the older kinds. This season the strawberry crop has been very large, and the price in market consequently ruled low. Nevertheless, taking into consideration the earliness of the fruits, the certainty of the crop on an average of seasons, the ease with which the strawberry can be cultivated and rapidly with which it comes into bearing, it pays, taking one year with another, a better profit than any other fruit that is grown. Next to the strawberry, in point of hardiness, productiveness and profit, comes, perhaps, the Lawton Blackberry, although this season the market was rather overstocked with it, owing to the competition of the wild blackberry. The finer kinds of raspberries are not so generally cultivated. Their tenderness and the uncertain yield militate against them. Yet with a proper selection of varieties and careful cultivation, there is no fruit that in the long run would better reward the grower. Moreover, speaking from our own experience, and also that of others even more competent to express an opinion, we assert that a few acres devoted to the cultivation of small fruits on farms within easy distance of a market will pay a better profit than ten times the number of acres devoted to a wheat crop.

We have an abiding faith in the profit to be derived from the cultivation of a variety of fruits. The occupation is a pleasant one, the breadth of land required is comparatively small, and the demand is constantly increasing both for immediate domestic consumption and for packing. But no man can succeed in fruit growing unless he devotes himself earnestly to the business, cultivates only the best sorts, and protects them alike—as far as it is possible for him to do so—from the ravages of insects and the changes of the seasons.

QUINCE GROWING.—An Ohio quince grower has been very successful for two years past with this fruit. His treatment of the tree is very simple. He spades the ground of his orchard every spring, and scatters a peck of coal-ashes around each tree. He finds salt the best manure for the quince, and applies about one quart to the ground under each tree after the soil has been spaded, and another quart when the quinces are about half grown. Last year he sold three hundred bushels of quinces from his orchard of three-fourths of an acre.

Our Agricultural Calendar.

Farm Work for July.

When the month of August has fairly set in, harvesting of the smaller cereals and of the hay crop is well over, and the corn is well advanced. This relaxation and the active operations of the farm leaves leisure for other crops which is quite important in its way, and which ought not to be neglected. Ditching and draining, for instance, may now be done to advantage, and there is also no period of the year at which weeds and briars can be more effectually extirpated. Preparations may likewise be made for putting in the fall crops. In this work no time should be lost, if the season is favorable and the teams at leisure. Where two ploughings are to be given to the fields intended for wheat, (and as a rule, except in sod land, this is always desirable), the earlier in the month the ploughs are set to work the better. Rye also should be seeded towards the close of the month, and turnips as soon as possible. These are matters which on a well ordered farm admit of no delay, for the dry, hot summer through which we are now passing may be the precursor of a wet fall, when, if the operations of the farm have been delayed, the labor of putting in the crops will be greatly increased. The work for the month is as follows:

Fall Turnips.

The best soil for turnips is a light sandy loam. If it is not rich it should be made so, and in the absence of well-rotted stable manure, the best commercial fertilizer will be found to be that which is rich in phosphates. In other words, a super-phosphate with a small percentage of ammonia to start the plant, will be found to add greatly to the yield of the crop. Plough the land deeply and harrow thoroughly, until the soil is reduced to a fine condition. If the drill system is adopted, run off the drills as for potatoes, about two feet eight inches apart; sprinkle rotted manure along the drill, or dust the sides heavily with super-phosphate; ridge up again, and then flatten down the crown of the ridge either with a light roller or the back of a rake. When this is done, make a shallow line along the centre of the flattened ridge half an inch deep; sow the seed sparingly along this drill and cover lightly. If the turnips are to be seeded broadcast, plough in first all the manure or the fertilizer just below the surface harrow; sow the seed thinly, and cross-harrow and roll. The subsequent cultivation is to keep the soil clean and light, and thin out the young plants from four to six inches apart.

Seeding Rye.

A light sandy loam is best adapted to the growth

of rye, but it will do tolerably well on almost any soil that is not too heated or too wet. Rye demands a considerable amount of silica, but does not draw heavily upon the other ingredients of the soil, as the following analysis of the grain and straw of rye will show:

	Grain.	Straw.
Potash, - - - - -	5.32	0.22
Soda, - - - - -	...	0.11
Lime, - - - - -	1.22	1.78
Magnesia, - - - - -	1.78	0.19
Alumina, - - - - -	0.66	0.25
Silica, - - - - -	1.64	22.97
Sulphuric Acid, - - - - -	0.23	1.70
Phosphoric Acid, - - - - -	0.46	0.51
Chloride, - - - - -	0.09	0.13
Oxide of Manganese, . - - - -	0.34	...

From the above it will be noticed that the straw of rye contains nearly twenty-three per cent. of silica; and that only small quantities of potash, lime and magnesia enter into the composition of the straw and grain. Either of the following mixtures would therefore be found a good dressing for an acre of rye:

1st. Five two-horse loads of barn-yard manure and fifteen bushels of wood ashes, composted.

2d. Thirty bushels of wood ashes; one hundred and fifty pounds of super-phosphate.

Quantity of Seed per Acre.—Sow from a bushel to a bushel and a half of seed to the acre, according to the quality of the soil.

Setting a Timothy Meadow.

To set well a timothy meadow which it is intended shall be productive for several years, three things are required: First, that the soil shall be rich, tolerably tenacious, and rather moist than dry; second, that it shall be well and deeply ploughed; and third, that it shall be free alike of weeds and briars. For a grass meadow that requires assistance there is nothing better than well-rotted stable manure mixed with ground bones and wood ashes. Where these are not to be had, wood ashes and super-phosphate of lime form in combination an excellent substitute. Assuming the grass to be well set, the meadow can be kept in good condition by an occasional scarifying with a sharp harrow, after the second year, to be followed by a top-dressing of wood ashes and bone dust.

Quantity of Seed to the Acre.—From a peck to a peck and a half of seed to the acre should be used.

Late Potatoes.

Keep the ground light and free of weeds, and stir the soil between the rows with the shovel-plough and cultivator.

Granaries.

See that these, if not already swept and purified are cleansed at once. Wash the sides and floors with hot ley, and then whitewash the whole.

Poultry Houses.

Clean these as advised above.

Threshing Out Grain.

Get the grain ready for market as soon as the work can conveniently be done. It loses less in a good granary than in mows or stacks, and an opportunity is given to take prompt advantage of any rise in price.

Late Corn.

Keep the ploughs and cultivators at work on late corn, so as to push it forward as rapidly as possible.

Fallowing for Wheat.

Plough early and plough deep for wheat, except in cases where a clover ley is to be used. On oat land, where the practice is to fallow with wheat, two ploughings should certainly be given—one now and the other towards the close of September.

Garden Work for August.

The work to be done in the garden this month is as follows:

Setting Out Cabbage Plants.—Set out late cabbage plants for winter supply as early as a favorable opportunity presents itself.

Spinach.—Drill in a few rows of spinach during the first and second weeks in the month, for use in September and October.

Asparagus Beds.—Keep the soil light and the beds free of weeds.

Turnips—Sow turnip seed as early as possible. For further directions see Farm Work in this number.

Celery.—Young celery plants may still be set out. Earth up the plants for blanching which are already bedded.

Small Salading.—Sow the seed of all the varieties of small salading at intervals of ten days during the month.

Peas.—A few rows of dwarf peas may be seeded in cool borders up to the middle of the month. They will require watering to bear well.

Beans.—Drill in a few rows of dwarf beans: water the plants liberally after they come up and regularly thereafter.

Lettuce.—Set out lettuce plants from the seed bed, and sow more seed for a fresh supply of plants at intervals of ten days apart.

Endive.—Tie up endive to blanch, and during the early part of the month sow more seed for the winter supply.

Melons, Cucumbers, &c.—Keep these well stirred and well weeded.

Lima or Carolina Beans.—Keep the soil light and loose about the vines, and water them liberally in dry weather.

NOTES and COMMENTARIES.

BY PATUXENT PLANTER.

Horses and Cattle.

It is a source of wonder to me why our Maryland farmers do not turn their attention more than they do, to the raising of fine stock, such as improved breeds of cattle, and thorough-bred running and trotting horses. One reason is, perhaps, the want of money to procure the breeding stock for the horses. But why do not the men of wealth who fancy fine horses for their elegant "turnouts" in the cities,—and there are many who spend thousands in dubious horse flesh,—do as many such in Northern cities, buy a fine stallion and let him to some careful farmer or country friend, who would take the requisite care of him, on shares, or pay reasonably for the keep of the progeny until three years old. In this way they would have a pair of horses, or one horse for use or sale, whose pedigree they know, and about whose soundness and disposition, and other qualities and defects they could not be deceived, at a cost of \$150 or even \$300, which in all probability would readily sell for \$1,000. It would also be a source of much pleasure to a gentleman in town who loved fine stock, but did not care about farming, and who did not choose to have the worry of farming largely or tenantry out a large estate, to buy fifty acres, or even twenty-five, erect a small cottage and a good stable, and put a man with one or more boys on it, to attend to the stock and raise a few vegetables for themselves. This would incur but a small outlay. Here a few choice cows of some one of the celebrated breeds, and running and trotting mares of good blood, could be kept, highly fed, carefully groomed, and reared according to the wishes of the owner. The hogs that might be raised on the surplus milk, together with the butter made, would nearly pay the wages, while the produce of such stock, kept in such manner, would be a source of revenue, beside the gratification derived by the owner in the possession of such improved stock and valuable animals. It is no little pleasure and a very laudable pride, to feel one's self the owner of a splendid team, which he bred and reared and broke himself, or under his direction. But every farmer can procure one female of high blood of one or the other, either a cow or a mare, or perhaps both, as a beginning, and the rearing of the colt or calf, except in bestowing a little more time and attention, would not cost more than if the colt or calf was of worthless breed. Pecuniarily it is as cheap to raise a calf to weigh one thousand pounds, at two years old, as to rear one of same weight at six years old. It is more economical to raise one colt, worth one thousand dollars, than to

raise four for that sum, or two hundred and fifty dollars. Yet this is not all; our farmers could, if they would, and it is clear that they should, raise more stock, even if they persist in keeping common stock and continue to pursue the barbarous plan of letting it shift for itself, or, like Topsy, let each colt or calf say as she did, "I brot myself up; nobody took care of me." Meat is enormously high; horses, common horses, are high priced. One of our own raising is worth, for hard work, two of the Western horses until they become acclimated. Horses reared by us are hardier, healthier and longer lived than horses from the North or West. I hope the day will come soon when our farmers will not sell, as they now do, their earliest and best lambs and calves, and will breed good horses or mules, rear all their calves and keep over all the early lambs, take better care and feed better all their stock, increase the value and number of stock of all kinds, and cease altogether from the common practice of breeding from indifferent males. It was hoped that the law requiring license for male horses would have put a large number of these inferior beasts to more suitable employment, but in our section every cross road, country store or blacksmith's shop, has one or more of these detestable beasts at ten dollars the season. Nothing would improve the stock of a neighborhood more than that only a certain number of males of the different species of stock should be kept by one man, or a company, and be offered at a low price, so every man could have its services, and be saved the expense and trouble of keeping one of each for his own few females. This should be the practice at least as to boars and bulls, both troublesome and expensive to keep, and yet under our system one of each is kept by each man, if he has but two sows and two cows. The consequence is, they are always a source of trouble to the owner and annoyance to his neighbor, often causing a break up of the friendship of years and inflicting great loss of money, producing white Devons and black Chesters, to the chagrin and mortification and pecuniary loss of him who, perhaps, after heavy expenditure of money and great attention, expected to boast of his fine Devon or Chester at the next Cattle Show, finds an admirable cross with a "landpike" or a curly-headed "old fielder!"

Earth Closets.

It is gratifying to know that much interest is manifested by general enquiry among farmers as to the use and benefit of earth closets, and the properties of dried earth as deodorizing material. The value of the fertilizer generally lost, and rendered a nuisance, is incalculable. By proper attention to this matter our people could manufacture yearly an immense amount of fertilizer, equal to the best

guano and bone dust, avoid unpleasant nuisances, suppress noxious vapors, add to the general health, and in many cases arrest infectious diseases, or, at least, contribute greatly to the suppression of the spread of such. They are invaluable in a sick room, and add at all times to family comfort. How strange that they are not immediately resorted to by every family, both rich and poor. In a very short time they pay for their cost, in health and comfort, cleanliness and time, beside the increased produce from their use and the proper application of their deposits. In household economy nothing has been contrived of late years to surpass this simple contrivance for converting into gold what has heretofore been a disagreeable bother, if not positive nuisance in every household. It may be truly said, *necessaries* have become luxuries.

"FINE GROWTH.—Mr. T. J. Hill, a careful farmer, about ten miles out on the Baltimore and Philadelphia turnpike, brought in a specimen yesterday of the fruits of a good domestic fertilizer, which he composts, in the product of two or three grains of white rye. The stalks were 5½ to 6 feet high, there being in one bunch sixty-five stalks and in the other forty-five, all with large, full heads."

I clip the above from the Baltimore *Sun*, and hope Mr. Hill will furnish through the columns of the *Maryland Farmer*, for the benefit of its readers, his method of composting that "good domestic fertilizer," which seems to be able to produce such immense results. There is no doubt, too little attention is paid to domestic manures. Fortunes are yearly thrown away by carelessness, neglect or ignorance. A better article can be made at home, with a small outlay of money, some skill and labor, than we purchase oftentimes at great cost. A man with one horse and cart, kept purposely for the one object of gathering materials and composting all the various articles that are usually suffered to waste and be lost, (which frequently become the source of sickness, by generating noxious gases,) would, by a further outlay of money in lime, plaster, bones, &c., produce in a year a mass of rich fertilizer, far exceeding in value the same cost expended in bought fertilizers. He would also be paying by cleaning the briars, seeds, fence corners and low grounds from which he gathered his materials for the compost heaps, and would be aiding the comfort and health of the stock and the hogs, by constantly supplying them with leaves for beds, and grass for cattle and horses, and turf, rotten wood, &c., for the hogs, who would be efficient aids or fellow laborers in his work. Surely a man and team would pay better than any other man and horse on the farm engaged in any other farm occupation.

Good Farmers do not leave their implements scattered over the farm, exposed to snow, rain, and heat.

COMMUNICATED FROM TENNESSEE.

HENDERSONVILLE, SUMMER COUNTY, TENN., }
 June 29th, 1870. }

To the Editors of the Maryland Farmer :

In my last, I advocated grass and stock raising as being the only plan to save our lands and make farming profitable under the present system of labor. Especially so is this the case upon the very large farms still owned and worked by many farmers in our country. He is the best farmer, in a pecuniary view, whether he cultivates much or little, and obtains the greatest amount of produce at the least expense. The crops to which a farmer may, to most advantage, devote his cultivation will deserve his particular consideration. Its excellence can be easily tested after the amounts of debits and credits are footed up. Hay is now worth twenty-eight dollars per ton, and most of our land put in the proper fix will produce from one ton to two tons per acre; in many places double the latter figure. Not long since, I cut from a very fine meadow, of a friend and neighbor, a bundle of timothy, measuring five feet four and one-half inches in height, nine and one-quarter inches being the length of the head. Such was on about twenty acres, while that on the hill side was considered very good. The cost of labor is comparatively small, with mowers, the principal expense being in housing; the delivery to market is also comparatively small cost. Whether or not it would pay us better to put our whole farms in meadow, and buy corn at two dollars and a half to three dollars per barrel, is a question that no farmer in our section of the country should be long in deciding. It will cost us at least those figures to grow corn; especially is this true when the wear and tear (a big item) of the land is taken into consideration. It saves our lands, and the waters of the Cumberland will not be so near the color of gold—emblematical of the farmer's wealth passing down its channel to choke up the mouth of the broad Mississippi.

I am endeavoring to practice what I preach, and get all of my arable lands well set in permanent grass—such kinds, on such soils, as are best suited to each other. It is a slow process, little by little, but in a few years its green mantle will cover my little farm. Requires time, as all lands have to be put in a “most beautiful” fix; sheds to be built, and a great deal of patience practiced. I have youth on my side, and am constantly consoled with the happy reflection, “*Rome was not built in a day.*” I have also found out, in my short experience, that to grow any crop profitably, the land must be put in that same “beautiful” fix. “Old fogies” do not think so, forgetting they have to use machinery, and that they do not possess the same “woolly head”

as in days gone by, which has been taken from them and better put into their hand; but so much afraid are they that Brother Old Fogy will laugh at the book farmer, they are prone to take hold. But, “let them rest, gently rest.”

Now, about stock, which can be so easily kept at small expense. We can sell readily a three-year old mule or horse at one hundred and fifty to two hundred dollars; fancy saddle or trotting horses from two hundred and fifty dollars to a nominal figure; have a splendid market for cattle, sheep and hogs. Besides being remunerative to us, they deposit in our barn-yards and over our lands the farmers' wealth, which, with the assistance given us by the *Maryland Farmer* and other magazines, in the shape of advice, how to compost, changes everything it touches into gold, producing a happy return in grass for our trouble. Here, after all, is the “rub.” Manure is needed on our fields, instead of being wasted in and around the barn-yards. Many of our so-called farmers say they have no time to haul manure. Why not say they have no time to attend to farming? How else can we awaken the dormant energies of our run-down, and in many cases impoverished lands. One of the first principles of agricultural chemistry is to give back to the land everything, or its equivalent, taken from it as a crop. I have often in my life heard that one acre of land well manured and cultivated is better than three acres imperfectly manured and cultivated. Agricultural improvements are slow, as it takes a year to accomplish the simplest experiment; but everything has a beginning, and in this case manure is the beginning, and remunerative crops of grass the desired end. Our harvests in many sections of the country are not looked upon as bountiful as they were last year, while in other places much larger.

Will some of your correspondents inform us what time to sow plaster upon clover sown with small grain, and how and when to apply to corn? or is it any immediate benefit to corn? We intend to pasture clover after the grain is cut off, but will be guided by experience and good reasoning hereafter if we are not correct.

With many good wishes for the success, useful information dispensed for public good by the *Maryland Farmer*, I am

Yours,

SMADA.

—•••—
 WHALE-OIL SOAP.—The best remedy, in our judgment, for slug pests on currants and roses, is the application of a solution of whale-oil soap (as we have often before suggested), in the proportion of one pound to five gallons of water, sprinkled over the leaves from a watering-pot with a fine hose. It is certain death to all it touches.—*Germantown Tel.*

DESTRUCTION OF NOXIOUS WEEDS.

At a recent meeting of the Central New York Farmers' Club, the regular subject for discussion, "The Destruction of Noxious Weeds," was opened by T. D. Curtis, in the following address:—

"I look upon noxious weeds as scourges sent to punish man for poor farming. I believe that soil properly cultivated and cared for, so as to turn the farmer the best results, will never be cursed with noxious weeds. They grow, as Col. De Barre said to the English government, as the American colonies grew—"by your neglect."

It seems to be the lot of man—whether it is more of a cause than a blessing, I have my doubts—to "eat his bread by the sweat of his brow." At least, this is the case in our northern climate, where few valuable fruits grow spontaneously. It is so ordained that the soil must produce something. If man, by his labor, does not cultivate it and make it grow what is useful to him, the spirit of the wilderness possesses it. The first warning of its coming is the growth of weeds. They are a timely notice that as far as man relinquishes his claim, Nature will assert hers. Let him neglect his field for a few years, and briars will follow the weeds; bushes will next creep in and choke out the briars; and, finally, a forest of young timber stretches out its branches to feel the grateful air and sunlight.

We may divide noxious weeds into three classes, namely: Those which like a wet soil; those which always appear on a poor, starved soil; and those which delight to creep into a neglected rich soil.

Those weeds which like a wet soil are not very tenacious, and disappear as soon as they are deprived of the requisite moisture. Hence, thoroughly draining is the remedy. It is the only way of redeeming swampy lands. When done thoroughly, all swampy weeds and grasses disappear. The land becomes useful and ready to grow whatever is planted by the hand of man or sown by the winds of heaven—except what it would grow before the spirit of the swamp was exorcised. It is now thoroughly reformed in character and habit. Proper cultivation will prevent it from becoming demoralized. Among the weeds which always appear on a poor, starved soil are the mullein, the white daisy and johnswort. At least, this is the case in some sections. Wherever I see them growing, I make up my mind that the soil is too poor to grow much of anything else—unless it be white beans, and these will not grow without cultivation. Farmers who grow white daisies to feed their cattle, always have such fields. They usually allow the crop to get dead ripe, so as to furnish an abundance of seed to mix with the barn-yard manure and seed the rest of the farm; and the stock that manages to survive

through the winter on such feed comes out "spring poor." I think summer fallowing and the plowing in of a few crops of buckwheat or clover, or of both, would kill the daisies and improve the land—to say nothing of the stock. I should not look for mulleins, johnswort, white daisies, or other weeds fond of a spare diet, to make their appearance again very soon.

The luxurious, aristocratic weeds, which thrive in a rich soil, are the Canada thistle, the burdock, the yellow dock, the horsedock, the cicuta and the like. Some of these will grow on a poor soil, but they do not flourish well on a very poor one. They are good livers, and are sure to take possession of any waste places not carefully watched. Once they get a hold on the soil, they cling with great tenacity. Only patience and relentless, untiring warfare can remove them, so far as I am aware. Yet, I believe that a succession of hoe-crops cultivated with care, followed by heavy seeding, will exterminate even the worst of them—the Canada thistle. I have known instances where very thistly ground devoted to hop-raising has been entirely freed from these annoying weeds—but the hop-yards were cultivated better than many that I have seen, some of which offer tempting invitations to thistles and all sorts of weeds.

My belief, founded on observation and some experience is, that a thorough cultivation of the useful, on the farm and in the moral world, is the surest and speediest way of eradicating noxious weeds of all kinds. Some weeds, like the thistle, may seem to require an application of the old Indian's remedy for fleas—"catch" em and cut their heads off;" yet, cultivate your fields as the good gardener does his garden—this is the way to get the largest profit—and you can get rid of any weed under the canopy of heaven.

All weeds that are propagated from the seed, are easily killed by mowing them and never allowing them to go to seed. Some assert that repeated mowing will kill even the Canada thistle. I have never known of a well-authenticated instance of thistles being eradicated in this way, although I have seen them very materially stunted and thinned. Cut them close into the ground, once every two or three weeks for as many years, and I think they will disappear. This is practicable with small patches, or in a field where hoe crops are raised; it will pay better than to let the thistles flourish.

One great source of discouragement to every farmer who wishes to clean out the weeds and keep them out, is the fact that his neighbor is not inclined to do the same thing. This is specially vexing, if the said neighbor happens to live on the windward side, so that the seeds of his well ripened crops of weeds are constantly drifting over the line. I union there

is strength in exterminating weeds, as in most other things. There is little doubt that every noxious weed in the country might be eradicated in five years, if every farmer would go at the work of extermination with a will. The end would seem to justify and encourage such concert of action. Yet farmer Indolence, farmer Surface, farmer Incompetent, and the rest of that branch of the human family, do not get up ambition enough to do their duty to themselves and to their neighbors. In the absence of the proper disposition, I am not certain that a little legislative stimulus would not be a good thing. We legislate to prevent the spread of contagious diseases and to suppress nuisances. Why should not our legislation for the promotion of agriculture, contemplate the eradication of all noxious weeds? The law requires this to be done along our highways, though it is but indifferently heeded. As we see "commit no nuisance" posted on the walls and the corners of our allies, why should not the statutes practically post in front of every farm-house—"grow no noxious weeds, under penalty of the law." I believe such prohibition would be perfectly justifiable, and prove of great benefit to the individual farmer as well as to the community at large.

"Art is man's nature," said one of the old English writers. Civilized man everywhere lives in an artificial state. He civilizes the soil as well as himself; and the agricultural condition of the soil of any country is a true index to the mental and moral culture of the inhabitants. In a wild country, we find wild and rude inhabitants. The man who grows weeds on his farm, grows them in his intellect, and allows them to flourish in his moral nature. Weeds are simply the evidences of lack of culture. Where you see them not, you will find the highest state of cultivation, both of the soil and of the mental and moral natures of the inhabitants.

The tendency everywhere is to return to a primitive condition. It is only by constant and persevering effort that we can keep ourselves or the soil from sinking back toward the original state of nature. He who does not labor to progress is sure to retrograde. Weeds every where are nature's *avant couriers*—her scouts, sent out to which and feel the enemy, and she is sure to make a breach at any weak point that may be discovered. Let every man, therefore, be watchful, for eternal vigilance is no more the price of political than of all other kinds of liberty. We must not only directly attack and destroy the weeds, but do what is more effectual—cultivate the useful. If we in this way seek first the Kingdom of Heaven and its righteousness, we have the right to expect that agriculturally all other things will be added."

Good farmers keep account of farm operations.

ONION CULTURE.

A. B. Crandell, at a recent meeting of the American Institute Farmers' Club, when the subject of onion culture was being discussed, stated that a gentleman of Wethersfield, Conn., who had attained great success in the culture of onions, made him the following statement:

He said the soil must be remarkably rich—the richer the better. If kept at the proper point of fertility, repeated crops must be produced on the same ground. He continues to plant onions in a garden that has been used for a similar purpose for at least eighty years, and he has found that the finest and longest keeping specimens came from the oldest garden. His favorite patch is manured each season at the rate of thirty cart loads per acre. The soil is not less than a foot in depth.

His practice is as follows: As soon as the frost is out of the ground he uses a subsoiler, which goes from one to two feet deep; a little later he puts in a plow, which goes down about four inches. He then makes the surface as smooth and mellow as possible, and plants as early as possible, in rows from eighteen to twenty inches apart. For this purpose the Wethersfield drill is recommended, being cheap and efficient. The cultivation commences about three weeks after the seed is sown, and one of the great principles is to keep the onions perfectly clean. Generally three weedings will be sufficient, and the crop does not require attention after the tops shade the ground.

The harvesting is done in September, and the best way is to make heaps of forty or fifty bushels each, cover with straw and leave in the field for a month or more. Six hundred bushels to the acre is a large return, but under the most favorable circumstances eight hundred can be produced. For next year's crop, it is a good practice to ridge the ground in the fall and split the ridges in the spring. For new land the best practice is to begin two years ahead, and take a crop of corn and afterward a crop of potatoes. The best manure is that obtained from cattle stalls. Occasionally, if the young blades look pale, a top-dressing of guano may be applied with advantage. The surest crop is the red Wethersfield, a variety which is large, hardy and strong.

For raising seed the same richness of soil is required, and the same strict attention to culture. The onions are set as early as possible, in rows 40 inches apart, at the rate of 250 bushels to the acre. They can be freed from weeds by the use of a horse hoe. When the tops are ripe enough they are clipped off, dried under shelter, threshed out, and run through an ordinary fanning mill.

Good farmers take good papers and read them.

AGRICULTURAL ADDRESS

Delivered before the Kent County, Md. Agricultural Society at its first meeting, June 20th, 1870.

BY JAMES A. PEARCE, ESQ., PRESIDENT.

As this is the first regular meeting of this Society, I think it is but proper respect to you that I should express my appreciation of the honor you have conferred upon me in selecting me as your President, and that I should, as briefly as may suit the occasion, state my conception of the value of such associations as this is, and my views of the mode in which it should be conducted.

I assure you then, gentlemen, that I do regard it as highly honorable, worthily to occupy the position of President of an association of active, intelligent and enterprising farmers, such as I believe you to be; and that I shall make it my constant effort to discharge the duties of my office to the best of my ability—feeling confident that if only moderate success should follow this undertaking, my own time will not be misspent, nor will our common efforts be unappreciated by our fellow-citizens.

It needs no argument from me to remind you, who are farmers, or to convince the public generally of the paramount importance of the occupation of farming. As it was the first employment which engaged the attention of mankind, in conjunction with the care of flocks and herds, so it is the only one which can never be superseded by the advance of knowledge, and the introduction of new industries. As it affords daily bread to individual exertion in the rudest stages of society, so in the most civilized and advanced communities, it is equally necessary in order to supply the physical wants of the thousands who crowd the trades and sciences everywhere—and who depend for the nourishment of their brain and muscle upon the fruits of the earth, which others prepare for their use. Just as the sphere of art and science is extended, and the tide of population follow along with it, is the necessity of increased productions of the earth. Nor can this end be properly attained by the mere increase of physical exertion or the appropriation of new fields of labor; skill and science must enter into the problem, and teach us how to double the results from the same area of land and with the same human labor. Wherever a dense population has been gathered, as a general rule, the science of agriculture is best understood, and most successfully prosecuted. The sterile moors of England have been transformed into smiling fields under this influence, in order to sustain the busy millions who have made that famous island great and powerful; and even the bleak hills of Scotland have been made to blossom like the rose. Holland, which was once almost one vast morass, that defied the arts of cultivation, and a great part of whose territory has been wrested from the embrace of the ocean, is perhaps the most fertile country in the world. France is one pleasure garden—as we learn from travellers—from one border to the other, and the beauty of their hedges and trees that line the wayside is almost marvellous. Even in our own country, in the New England States, where population has been most dense, the advances made in agricultural pursuits have been most surprising. Their climate is cold and severe—their soil, in great part, barren and ungracious—unmanageable rocks and naked hills

sides are found in close succession throughout their whole extent. Their population is largely engaged in manufacturing, in fisheries, and in other sea-faring avocations; yet they have gathered wealth from their soil, and in the permanence of their improvements, and the present result of their system they put to shame many portions of our own and other States so much more favored in soil and climate.

It is impossible for me to go further into this branch of the question, upon this occasion, nor would I venture to do so without adequate preparation; but enough has been said, I think, to remind you of how vast importance is the proper cultivation of the earth; and I will only add that this importance has always been understood quite as fully by the intelligent men of other pursuits in life as by those who make agriculture their exclusive occupation. In all ages it has been so. The great Latin poet, Virgil, has left us in his *Georgics* and *Bucolics*, his testimony to the importance of agriculture, and the proof that he understood the theme of his verse. Philosophers and Statesmen everywhere unite in this sentiment; and almost every country at some stage of her existence, has honored the calling by summoning some Cincinnatus from the plough to guide the ship of State. I need not remind you that the first President of this country was a model farmer all his life; and that more than one of his successors was called from the same pursuits. I need not suggest to you how frequently the foremost men of all countries, when wearied with the contests of the political arena or exhausted by the constant wear and tear of active professional life, retire to the country, and as farmers add wealth to their State and honor to themselves, no less than they did in their former pursuits. Judge Buel, of New York; Judge Peters, of Pennsylvania; Edmund Ruffin and Col. Wm. Taylor, of Virginia; Col. Lloyd and Gen. Tilghman, of Maryland, are names familiar to all, and amply sufficient to point the moral of this tale without going further for others.

The present period in the history of the Southern and Middle States I regard as a most auspicious one for the advancement of agricultural science, and especially so for the formation of Agricultural Societies based upon sound principles and conducted by men of energy and judgment. We have entered upon a new system of labor, which must necessarily compel great changes in the cultivation of land, where slave labor formerly was employed, and which in all the States where slavery existed is most sensibly felt. The inconveniences growing out of this change are temporarily very great, but must put into active exertion the leading minds of the agricultural interest; and the remedy will not be looked for in vain. When the new labor system shall be thoroughly organized, and the reciprocal relation of hirer and laborer firmly settled here as in other countries where free labor is universal, I look for great advantages to follow. We have but lately emerged from a long and exhausting war which has borne most heavily upon the agriculturist class, and which has left very many of them in circumstances of extreme embarrassment and poverty. Some of these will, I fear, be unable to meet their obligations, and will have to begin again the battle of life; but I do not hesitate to express the belief that if creditors generally will exercise that forbearance which is the dictate as well of true wisdom as of genuine humanity, there are com-

paratively few who need despair of retrieving their fortunes if they do but put forth their energies with a will.

The taxation to which we are subjected in this country is most onerous, and must be borne in great part by the landed interest, upon which, ultimately, nearly every form of taxation is devolved. Farmers consume in one shape or other almost every article upon which a tax is laid. Sugar, coffee, tea, salt, &c., their laborers and their families must have; and wages must be correspondingly increased. Woolen and cotton goods, shoes, &c., are all essentials in a family for every member, to say nothing of silks and other fine fabrics, which are too often thought to be essentials, and all these enter into the revenue list. Iron, steel and leather enter largely into the construction of their farming implements, carriages, harness, &c., and help to swell the enormous aggregate receipts of the General Government. The various chemicals which are used in the manufacture of the commercial fertilizers, now so largely used, are also taxed to the utmost. We know that the consumer has to bear the tax in the end, whoever first assumes to settle it with the revenue officer; and as the bonded wealth of the country is exempt from taxation, the landed interest must raise the lion's share of this revenue; and in order to meet this demand, brains as well as muscle and industry are needed. We can expect comparatively little relief, I fear, from Federal taxation for some time to come. Conscientious investigation and a returning sense of justice may strike from the list some of the most odious features of taxation; but the national debt must be paid, if we would avoid the wide-spread ruin and disaster which would be visited upon the people at large by the adoption of a different course; and we can therefore expect very little material reduction of taxation for many years to come. All these difficulties should be so many incentives to renewed exertion; and it is in the increased activity of the aggregate agricultural mind, the stimulus to new and more vigorous efforts, that I see the promise of solid advances in the immediate future.

The difficulty with farmers at all times is, that there is so little interchange of opinion—so little concert of action—and it is just in their tendency to remove this difficulty, that it seems to me most benefit is to be expected from such societies as the one we are forming. I do not, indeed, expect that every one who attends such a society, however brilliant may be its meeting, will become a Solomon among farmers; but I do think that he who attends regularly, and contributes to the best of his ability, will be but a dull fellow if he can learn nothing worth his while. A man who hoards his gold as fast as he earns it, may in the lapse of time become a rich one, but the process will be a slow one, and his gold will be of no real service to himself or the world; while one who earns less, but turns it over often, will far outstrip him in the race for wealth; and his gold assists to aid others as well as himself. All rapid advances in arts and sciences are attained by free communication of mind with mind; free interchange of experiment and observation. If George Stevenson and the projectors of other engineering wonders, had had as little exchange of experiment and theory as is the custom with farmers generally, the Pacific Railroad would have been postponed a hundred years; and if mechanics generally were as isolated as farmers, and as little indebted to mu-

tual help, the Hussey reaper would have been king of the harvest field.

I know that to some extent this is a necessary incident of the farmer's life. I know that it is extremely difficult to remove the tendency to this state of facts, but I also know that the tendency is greatly exaggerated, and that a few leading spirits could effect a wonderful change in the aggregate class. By punctual attendance and generous contributions to the proceeding of the Society, the interest of the individual members and the advancement of the Society can be secured and maintained, and any one who reflects upon the gregarious character of men in general, and especially the impressibility of the American people, will at once perceive how wide would be the influence of two or three such clubs in a county. Any one who will refer to the files of the *American Farmer* from 1819 to 1830, will be satisfied what may be accomplished by such clubs. That paper was then edited with singular ability; but no one man—not even the then editor, John S. Skinner—could have made it what it was at that time. Essays from the pen of some of the most distinguished agriculturists of the day, addresses before farmers' societies by the most polished and wealthiest citizens of the country, letters and controversies between practical and intelligent farmers upon disputed practice, everything which could interest or benefit the searcher for such knowledge, abounded in its pages, and combined to make it an invaluable paper. I want to see the farmers of the present period evince the same interest in their Agricultural Associations as was shown by the farmers of the period I refer to. I want them to exhibit the same enthusiasm in their recognized organ as was then felt, and to make it again what it was then—not merely the exponent of one man's thought, however competent for the position, but the common repository of cultivated and practical agriculturists.

I want to hear every year before this society, and before others throughout our State, an address upon some agricultural subject—not such a crude and ill-digested discourse, from an inexperienced amateur farmer like myself, which I have offered only as a mark of respect for your preference and as a stimulus to better things hereafter—but a mature, well considered discourse from some of the many able and experienced farmers of our own State and Shore, who, I am sure, would lend their aid to the advancement of our cause.

When this spirit animates our farmers we shall then have made a great step towards attaining the advanced results in our occupation which the age demands, and which our natural advantages so cordially invite.

LIME ON GREEN SWARD.—A writer in the *Journal of the Royal Agricultural Society*, describing the permanence of the action of lime, says that he knows a piece of ground containing 166 acres, which formerly grew nothing but heath. A good dressing of lime was applied on the surface of the sward which has nearly doubled its value. This was done several years ago and totally eradicated the heath. The lime to this day appears in full action, as its effects usually testify, from the richness and sweetness of the herbage, the texture of which has been entirely changed by the application of lime.

CLOVER, &c.

In the March No. of the Cultivator, I was pleased to see an excellent communication on the subject of raising clover, by TRIFOLIUM, of Bartow Co. Having been for many years engaged in cultivating clover and the various grasses in the Shenandoah Valley of Virginia, and now producing very heavy crops of Clover and Timothy, in the vicinity of Rome, Ga., I feel it a duty I owe to the farmers of my adopted country, to give them all the information I am possessed of upon this, to us, all important subject. In this communication, I will confine myself to clover. At some future time I may have something to say in regard to the grasses, I think best suited to our climate and purposes.

I heartily concur with TRIFOLIUM, in many of his views. But I think some of his conclusions are very erroneous. He asserts that sowing clover on small grain in the *Spring*, is worse than time thrown away, and goes on to give a deplorable account of his failure to set forty acres of oats and wheat land. Now the question is, why did his clover fail? The fault was not in the seed, for they vegetated. It was not because of the excessive drouth, that prevailed all over our country last year. I know many fine stands sown at the same time his was, and on small grain. Perhaps the *preparation* of his oat and wheat ground, was not *pleasing* to his young clover. Will TRIFOLIUM please do his clover-raising friends the favor to let us know through the columns of the *Cultivator* exactly how he prepared his oat and wheat land—what kind and size plows and harrows he used, &c., &c?

I will now, as briefly and plainly as possible, give my views and limited experience in clover raising in Georgia.

In the fall of 1867, I ploughed a small field of 11 acres, from which a crop of wheat had been harvested that year. The stubble, grass, weeds and trash generally, was deeply and well turned under with the largest sized Livingston plow, drawn by three stout mules; the ground was then well harrowed with a heavy iron tooth harrow. I then put in the wheat with one of BICKFORD & HUFFMAN'S World Renowned Drills, (my wheat came up well and made a fine crop.) On the 18th of February following, I sowed some one and a half bushels each, clover and timothy seed, on the 11 acres, and immediately with a light small-tooth harrow, harrowed in the seed. The harrow was run without any reference to the drill rows of the wheat, and benefitted the wheat very much. A light harrow with three-quarter inch square teeth, made as pointed as possible, will pull up very little wheat.

My timothy failed to a great extent, in consequence of the seed not being good. The clover

came up well and grew rapidly. The deep ploughing, and thorough pulverizing of the land by the free use of the harrow, left the ground in a proper condition for clover to *live in*. After cutting off the wheat, the clover came to a stand still in its growth, in consequence of the great drought and excessively hot weather, which continued until late in August. After the rain set in the clover made a rapid growth, some attained a length of three and a half feet; much of it maturing seed before frost. None of it was killed by the drouth and hot weather, nor was any frozen out the following winter. The crop cut last harvest, being the first, made thirty tons perfectly cured hay. With such crops of hay selling in Rome to day at \$40 per ton, I will be perfectly satisfied with the business, and let my neighbors who prefer to wear out their land raising cotton, carry out their inclinations. But hope at no distant day, to see fine clover and grass fields adorning every farm in Cherokee Georgia. Then, in the elegant and truthful language of "TRIFOLIUM," there will be a blessed time, &c.

I see from TRIFOLIUM'S article he intends sowing Clover seed in his corn fields next fall. Will he do his farming friends the favor to tell them how he proposes to have the ground in condition for mowing the clover, in the event he succeeds in getting a good stand in that way?

I think it bad economy to seed clover alone. As it will require the same amount of labour to prepare the ground for a clover crop alone, as it would for wheat and clover together. Thereby partially, at least, losing the profits of a wheat crop. Columns might be written on this important subject; but I will close by saying, *he who ploughs deeply, mashes the clods, and harrows thoroughly, uses good seed, puts plenty of them on the ground, and don't pasture his clover to death, when young, will seldom, fail to get a good stand and make good crops.*—F. P., the Southern Cultivator.

CHEAP AND FINE VARNISH FOR WOOD.—The beautiful varnish applied to Connecticut clock-cases, wooden picture-frames, and other cheap objects, is in appearance equal to the elaborate finish of the finest furniture, such as pianos, etc. It is made by mixing two pounds of copal varnish with half an ounce of linseed-oil varnish. The mixture is shaken often to mix it well, and is then placed on a warm spot. The wood to be varnished is prepared with a thin coat of glue-water, dried slowly, and rubbed down with fine pumice-stone or something equivalent. In light-colored wood, a light pigment, such as chalk, is added to the glue-water; in dark wood, an equally dark pigment is added. When ready, the articles are varnished with the above mixture, and, after drying, rubbed with a solution of wax in ether, thereby acquiring a high polish.

WHAT A MARYLAND EDITOR MAKES OFF A VIRGINIA FARM.

Daniel Dechert, Esq., editor and proprietor of the Hagerstown (Md.) *Mail*, purchased a farm in Halifax County, Virginia, some eighteen months since. He got it very cheap. This is the first season that he has gathered a full crop. In writing a private letter to the editor of the Lancaster (Pa.) *Intelligencer*, that editor volunteered to publish the following extract:

"I wish you would run down and see me this summer, while I am at my farm. There is plenty of fishing here. I expect my crops this year to net me not less than \$10,000, and they may reach \$12,000. I will make 1,500 bushels of wheat, 1,000 barrels of corn, (5 bushels to the barrel) about 5,000 bushels of oats, 10 tons of broom corn (besides the seed) and about \$3,000 worth of tobacco."

The following letter subsequently addressed to the editor of the *Intelligencer* will explain itself. It was written in reply to the above and for publication, and will no doubt interest the farmers of Maryland:

HAGERSTOWN, July 13th, 1870.

H. G. SMITH, Esq.,

Editor "*Lancaster Intelligencer*."

My Dear Sir:—I have been for the past four weeks on my plantation in Halifax Co., Va., harvesting and gathering my crops of wheat and oats. Upon my return yesterday I found that a portion of a private letter I had written you in regard to my prospects for crops had been made public by its insertion in the *Intelligencer*, from which it was copied into the city and country newspapers, generally.

I did not write the little squib referred to for the public eye, and I censured you for giving my private operations publicity. But, as you certainly published the item with the best feelings towards me, and, in the interests of Virginia, I will forgive you, and only ask the favor of the insertion of this letter in your paper, which will explain more fully and satisfactorily my estimate that I would reap this year off of my Virginia plantation the sum total of \$10,000 worth of crops.

I have probably about 450 acres of land in cultivation this year, about 250 of which is rich alluvial river bottom. Of this quantity of land in cultivation something over 100 acres was sown in wheat, which has produced splendidly, and by actual measurement of a portion of the crop thrashed and sent to market (and I think since sold at \$1.65 per bushel,) I made twenty bushels to the acre. This measurement was made to upland wheat, soil a light gravelly loam, on which I used Chappell's Champion Fertilizer, which has acted to a charm with me on all the crops where I applied it. A second hundred acres was sown in oats, and such

oats! You know what a "tall" chap I am, and when I assure you that Pennsylvania seed oats of the black variety, grew waist high, and so thick that the yield will not be less than fifty bushels to the acre, I am not exaggerating. I was almost three days with two reapers and several cradles cutting this crop and will soon thresh and send it to market, where it will probably bring me sixty cents per bushel. Of corn I have on the place about 175 acres planted and growing luxuriantly. Riding through the field the other day I was hid from view with its dark green covering. I had most of the corn planted Pennsylvania style, two and three stalks to the hill (which is a new idea in that portion of Virginia,) and promises the best results.—This crop I consider made, as much of it, when I left the farm, was eared and shooting. Forty acres of my low grounds are in broom corn, which from the appearance of the crop I consider as admirably adapted to its successful growth, and with proper care and cultivation will, I have no doubt, yield as well as the far-famed Sciota bottoms of the Buckeye State. Placing this crop at 600 pounds to the acre, and it may reach 1000, you will see that my estimate of ten tons is very moderate. Of tobacco I have growing about twenty-five acres, over 100,000 hills. This is looking remarkably well, and should a good season favor me will make me all that I claimed. Besides the crops detailed, I have minor crops out, Navy Beans, Ruta Bagas, Potatoes, &c., which will help to swell the sum total. Of potatoes alone I expect to make 500 bushels.

Now, my dear sir, I do not make this statement for the purpose of boasting, but to set myself right, and to give your Lancaster County farmers an idea of the fertility of the soil of Southern Virginia.—My farm cost me \$3 per acre, and I am quite sure that I will clear the purchase money with this year's crop, should the season continue favorable. Land just as good as mine can be purchased in that section at the present time from \$10 to \$20 per acre, on which are fair improvements, and well watered and timbered. The timber is composed principally of the same varieties of oak that we have here in the Cumberland Valley, with hickory and large yellow pines. Take the timber generally and it is superior to the timber of the Cumberland Valley.

Should your Lancaster county farmers desire to know more of Southern Virginia and the rich lands of the Dan River Valley, I will answer such inquiries as they may wish to make, and give them proper directions how to reach that particular section of Virginia, should they desire to visit it.

Very respectfully,

DANIEL DECHERT.

A box 24 by 16 inches, 22 deep, contains 1 barrel.

VALUE OF SALT AS MANURE.

A correspondent of the *Western Rural* seeks information of the editor as to the value and use of salt as a fertilizer. "How much per acre? What kind of crops should it be applied to and at what time?—also, the results of its application, &c." To which the editor replies as follows:

The uses of common salt as a manure for crops are as follows:

It supplies soda and chlorine.

It attracts moistures, and resists frost.

It is soluble, and is attracted by porous substances.

It promotes putrefaction when used sparingly.

It decomposes with lime and other salts, and forms valuable compounds.

It kills wire worms and other insects injurious to agriculture.

Salt used in conjunction with barn-yard manure, has been found to produce a larger crop of turnips than double the quantity of that manure without salt. Lime and salt promote the decay of weeds and vegetables, and hastens the decomposition of turf and peat in a greater degree than either of these manures taken singly. Gypsum and salt, mixed, form an excellent manure. Liebig says: "Common salt enables the plant to extract its sulphur from the ground, where it has existed as sulphate of lime."

The seed of the cereal and leguminous crop is much improved in size and color by the judicious application of salt. It acts well in conjunction with ammoniacal manures; the proportion should be three times as much salt, as they contain salts of ammonia. The salt gives strength and solidity to the stem and grain, while the size and luxuriance of the plant is increased by the ammonia.

It is to be regretted that a greater number of experiments with salt, as a manure, are not tried annually in the United States, as the refuse of salt works and of beef and pork packing establishments can be obtained in many places for a mere trifle.—Michigan produces salt and gypsum in large quantities—manures which are exceedingly useful when applied separately or in conjunction. We hope that numerous experiments will be tried this year with these fertilizers.

A farmer, in England, who has been for many years using salt extensively, as a manure for various crops, says that he applies it as a top-dressing for all his grain crops in the month of April or May, as the season may be, by sowing broadcast three to four cwt. per acre, taking care to do this after sunset. If the young plants should appear sickly and turn yellow, it is a sign that the wire-worms or grubs are making inroads upon them, and he has

always found the application of salt to exterminate these destructive insects.

He says that the yield of wheat per acre is four bushels more from the salted than from the unsalted land, when all other circumstances have been precisely the same; and from the salted land, he gets a much bolder, brighter, and heavier sample of wheat, and the crop has been entirely free from rust, blight, or smut.

To fallows, he applies from seven to 1,000 pounds per acre, sown broadcast, as much before the time of sowing the seed as circumstances will permit, in order that the salt may, in the different workings of the land, get thoroughly incorporated with the soil, and then he finds that hurtful insects will not generate in it.

He applies from seven to 10 cwt. of salt per acre, in December or January, to land intended for potatoes. In about two months afterward, he dresses the land with lime, and in the proper time prepares the soil for the seed by deep plowing, harrowing, and rolling, the opening of drills, and the spreading of manure in them after the seed has been deposited, then closing the drills and rolling. He gets excellent crops of potatoes by this management.

SMUT IN WHEAT.

Wm. Cunningham, of Caldwell, Ohio, sends a head of wheat and another of smut, to the American InSTITUTE Farmer's Club, which grew side by side, and asked the cause and cure. Mr. Fuller said smut is attributable to the season—the condition of the atmosphere. Mr. Burdick said his father (a miller) had observed that the more snow there was in winter the more smut, his theory being that the heaving of the soil broke the roots of the plant, weakened it, and thus it became diseased. [But Mr. Burdick's father ought to have known that the more snow the less heaving of the soil; also that spring wheat is often very smutty, although it can feel no influence from frost.—*Editors Rural New Yorker*.] Dr. Trimble says smut is a fungus, and the spores may be propagated or carried over from year to year on the seed, unless it is brined and limed. Mr. Curtis said the preventive of smut is to sow good seed. It is well known that soaking the seed in strong brine over night, and drying it in lime or plaster prevents smut; but the prevalent idea that the spores of the fungi are destroyed he believes to be erroneous. The facts are, that if the seed is put in strong brine, the good seed settles to the bottom, and the light, imperfect seed rises, and is poured off with the brine. Thus, good seed produces strong, healthy plants, (if the soil is right,) and disease does not attack them. It is with plants as with men; a weak man is more liable to succumb to disease than a strong one; so is a weak plant. The brining and liming seed wheat is to be commended.

BOOKS FOR NEW BEGINNERS.

A gentleman in Kentucky writes me to the following effect :

"I would like to obtain a book of instructions for young farmers or persons who have but little practical knowledge of farming. If you know of such a book, will you be kind enough to inform me of its name, and where it can be obtained?"

My observation and private answer to this correspondent were that single books on so extensive a topic were apt to be lacking in the requisite minuteness of detail which new beginners require. As a single work, I believe the five volumes of *Rural Affairs*, edited by J. J. Thomas, and published by Luther Tucker & Son, to be practically the best.

But my observation is that the best way is to purchase the best book on each of the several specialties, and not to stop at one. A small sum of money discreetly expended in a library of fifteen or twenty farms book, to be read, is one of the best investments the beginner can make. And here is my list, taking into account the books I have read and know to be good.

If a person has had good advantages of education, he ought first to have some of the scientific books bearing on the subject, but if he be hunting practice without a reason for it, he can let these alone.

How Crops Grow. By Prof. S. W. Johnson.
How Crops Feed. By Prof. S. W. Johnson.
Draining for Profit. By Waring (or French).
Farm Implements. By J. J. Thomas.
Variation of Animals and Plants. By Darwin.
Field, Garden, and Forest Botany. By Gray.
Weeds and Useful Plants. By Darlington.
** Grasses and Forage Plants.* By Flint.
Burr's Vegetables of America.
Henderson's Gardening for Profit.
Downing's Fruit and Fruit-Trees.
Thomas's Fruit Culturist.
Husman's Grape and Wine-Making.
Fuller's Small Fruits.
Hoope's Book of Evergreens.
Parkman's Book of Roses.
Rand's Bulbs.
Rand's Seventy-five Flowers.
Tenny's Natural History.
Allen's American Cattle.
Flint's Milch Cows and Dairy Farming.
Herbert's Hints to Horse-Keepers. (?)
Harris On the Pig.
Randall's Practical Shepherd.
Downing's Landscape-Gardening.

There are twenty-five, none of which I should wish to be without; but which do not altogether include all that ought to be said on the details of many subjects, and their cost, purchased together at wholesale rates, I presume, would not vary much from fifty dollars. To any but book-farmers, this would seem a large investment in the literature of one's calling, but I am confident it would be a profitable investment.

Our agricultural literature is still quite deficient, though vastly improved within the last few years. Time was when our farm-books were reprints of English publications, or, worse still, were appropriated from such sources, and remodelled very lit-

tle to their improvement, and then put out as American works. Now, in many departments, we have really excellent hand-books. But we lack a good book on meteorology, and we need another, I imagine, on the geology of soils. I think we still need a good hand-book of practical entomology, though the material for it is being rapidly gathered. I do not find a good general work on the horse though I have not examined all that have been published in this country. A good work on rural economy is a great desideratum. It would stimulate thought upon some points of general farm management that are often, perhaps even generally, lost sight of.

In my own collection, I have considered it a good point to collect as many works as may be that bear upon rural life, and are calculated in any way to render it attractive. The books of ancient agriculture, such as the Works and Days of Hesiod, the Idyls of Theocritus, the Georgics and Bucolics of Virgil attract the classical student, and constitute a bond between the cloister and the farm-house. Miss Mitford's *Tales of Our Village*, and Alice Cary's charming sketches render even more attractive the quiet life and country scenes they depict. Thomson's "Seasons," Tusser's "Five Hundred Points of Good Husbandry," and other poems, descriptive, didactic, and epic, all lend something of dignity and much of zest to even our own country life. So that I reckon even a good novel may be useful in teaching the sentiment as well as the idea of country life, and that the imagination of the poets may well kindle the enthusiasm of the farmer, and give to his calling a higher and more attractive aspect than it has to many.

So, too, I have thought that we should buy more landscape pictures, more animal paintings, and generally those works of art that would connect us in our country-houses more directly with the great realm of nature without. Let us discard bad portraits and fanciful historical pictures, and introduce Rosa Bonheur, Herring, and Landseer, and we shall seem more in unison, and really be so, with the mingling of animal and vegetable life that surrounds the farmer.—*Hearth and Home.* W. C. F.

THE HAPPY WIFE.

Behold, how fair of eye and mild of mien,
 Walks forth of marriage yonder gentle queen;
 What chaste sobriety when'er she speaks,
 What glad content sits smiling on her cheeks;
 What plans of goodness in that bosom glow;
 What prudent care is thorned upon her brow,
 What tender truth in all she does or says,
 What pleasantness and peace in all her ways;
 Forever blooming on that cheerful face,
 Home's best affections grow divine in grace;
 Her eyes are ray'd with love, serene and bright,
 Charity wreaths her lips with smiles of light;
 Her kindly voice hath music in its notes;
 And Heaven's own atmosphere around her floats!

THE FARM-LABOR QUESTION.

The following sensible remarks on the subject of skilled and unskilled labor we extract from an article on that subject from the *Hearth and Home*, and commend it to our people generally:—

Every year renders unskilled labor less valuable to the farmer. We have already solved the problem of performing every operation in the cutting and securing of hay by machinery; we mow, ted, rake, load, pitch off, and mow away by horse power. We need but one link (the binder) to accomplish the same for grain, and this will soon be invented.

We therefore need men who understand the principles of mechanics to superintend farm operations, and the laborer must, at least become an expert in the use of machinery before he can be useful.

Every thing points now to the introduction of a class of skilled farm workmen, who will require to learn their business as methodically as any mechanic, and then will be paid in proportion to their skill. When, by the use of machinery in all branches of farm labor, one man shall accomplish as much as three to four do now by hand, then may the hours of labor be reduced to eight, and the laborer be paid as much as now. We think the day is not far off when it will be practicable to perform all necessary labor on the farm during eight hours daily, and perhaps six, and this will yield a return sufficient to support the laborer and his family.

The isolated condition of farmers has led them to buy, sell and generally to operate individually and frequently in opposition to each other. Nearly every department of labor is organized and each operates as a unit on any question pertaining to the general interest. Why should not farmers co-operate as other departments of labor do? They seem never to consult their mutual interest, but in hiring hands evidently regard it as smart to compete with each other, and some times tempt the laborer to break his contract by offering more. Farmers have long enough been at the mercy of every other occupation by want of unity among themselves. Will they never see that in unity is strength?

If agriculturists would form themselves into co-operative societies, it would soon cause a greater uniformity in the price of products, an easier sale of the surplus, greater uniformity and less fluctuation in the price of labor, and save them many times from exorbitant wages.

A county society, composed of a body of the best farmers, would be more likely to decide upon a scale of prices which would be just, than if left to individuals. This would prevent any attempt to overreach each other, would make wages uniform over large districts, and be better for laborer and employer.

PEAR CULTURE---ROOT PRUNING.

In an essay on pear culture read before the Alton Horticultural Society, by H. J. Hyde, occurs the following: "As to root pruning to control blight, I am a believer in its efficacy not from theory alone, but from practice the last four years. I think pear trees are as tenacious of life as most fruit trees. I see it every year on my place. It may be others have noticed it, that trees attacked with blight, that are not killed the same season, will put forth the following year with even more vigor sometimes than if the tops were not reduced by the blight; by a proper system of root pruning we can control the blight; and why? Simply if our trees are thrifty they grow all summer, and when attacked the sap is active and the disease spreads like fire: but if root pruned they form their terminal bud early, the tree is repairing root growth, the sap is not active, and cannot and does not extend enough to do any serious damage. It seems to me that, from time to time, there have been arguments enough made and assertions from different parties, to at least warrant a thorough trial of this system; but there are those whom we might argue with for years, who would not be convinced; still, if they would try the remedy, they would either help to establish the fact or give themselves a good argument against it, and could claim with some sense that the mere theory of root pruning is a humbug. What is wanted are the facts; you who have pear trees try this, and know yourself, whether or not it is a failure."

AN APPROVED WHITEWASH.—The following is sent out by the Lighthouse Board of the Treasury Department: "The following recipe for whitewashing has been found, by experience, to answer on wood, brick and stone, nearly as well as oil paint, and is much cheaper. Slake half a bushel of unslaked lime with boiling water, keeping it covered during the process. Strain it, and add a peck of salt, dissolved in warm water; three pounds of ground rice put in boiling water, and boiled to a thin paste; half a pound of powdered Spanish whiting, and a pound of clear glue, dissolved in warm water; mix these well together, and let the mixture stand for several days. Keep the wash thus prepared in a kettle or portable furnace, and when used put it on as hot as possible, with painter's or whitewash brushes."

TO DESTROY BURDOCKS.—The following cheap and sure destruction to burdocks and other troublesome plants is given by a correspondent of the *Rural New Yorker*, and worth knowing: Cut close to the ground with a sharp hoe, and apply a few drops of kerosene. The plants so treated will never "put in appearance" again.

THE CELEBRATED ROCKFORD SEEDER AND CULTIVATOR.



The above represents an implement new in this market, but which has been tried successfully and extensively in the West, in the great wheat growing districts. It sows the grain very evenly, and is an excellent Cultivator.

It will cultivate without sowing or sow without cultivating, and is regulated to sow any amount, from four quarts to four bushels per acre. The teeth accommodate themselves to uneven ground. It sows all kinds of seed, from flax seed down to beans, and is capable of sowing from ten to fifteen acres per day. Price \$85. With Grass Seed Attachment for sowing Timothy, Clover, &c., \$6 extra.

Osage Orange Hedges.

We publish the following instructions given by the agricultural editor of the *New York Tribune*:

"Procure from some reliable seed dealer the quantity of seed you want. The Osage Orange seed should be of last year's growth; older seed is unreliable and may not sprout. Before sowing the seed should be soaked in warm water for two or three days. Then pour off the water and spread the seed on tables in some cool, dry place, turning it over once or twice every day to prevent fermentation. In the meantime select a piece of deep, rich soil for a seed-bed. The top soil should be made mellow by plowing, forking, or spading it over two or three times. Then level the surface with a rake, and make drills two inches deep, and two and a half feet apart. In these drills sow the seed thickly and cover carefully with fine loose soil. If the ground has a tendency to bake or crust on the surface, a light covering of straw may be put on the seed rows until the young plants come through the surface. The seed-bed should be kept loose and entirely free from weeds to insure strong, healthy plants, and with such treatment the osage plants will be large enough to transplant in the

hedge row when one year old. During the summer prepare the hedge lines by plowing three or four furrows on either side of the intended hedge, so that the ground will be loose and easily worked the following spring in setting out the young plants in the hedge row. Some of our most experienced nurserymen dig and sort the plants in the fall, have them tied in bundles and heeled in, until wanted in the spring. When tied in bundles a portion of the tops and long roots are chopped off with an ax. They are then ready for shipping or transplanting."

AN UNFRUITFUL APPLE TREE.—H. Bailey, writes the *Rural New Yorker*, that he has an old apple tree which used to bear fifteen or twenty bushels of good fruit annually; but for the last eight or ten years it has ceased bearing. It blossoms very full every year, but produces little fruit. Wants to know what ails the tree. It wants feeding. The effort to bloom exhausts it. Give the ground under it a heavy top-dressing of cow-stable manure and muck, with ashes. Do not stint in the quantity. Pay the poor old tree what you owe it. Give it a good bath of strong soap suds. We will warrant it will repay such treatment,

THE MARYLAND FARMER

AT \$1.50 PER ANNUM,

PUBLISHED ON THE 1ST OF EACH MONTH,
BY

S. SANDS MILLS & CO.

No. 145 West Pratt Street,
Opposite the Maltby House,
BALTIMORE.

S. SANDS MILLS, } PUBLISHERS AND PROPRIETORS.
E. WHITMAN, }

BALTIMORE, AUGUST 1, 1870.

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AGRICULTURAL ADDRESS.—We publish in this number of the *Farmer*, the very sensible address of James A. Pearce, Esq., delivered before the Kent County Agricultural Society, on the occasion of its first meeting, on June 20th last. We especially call attention to that portion of his address where he alludes to the benefits of agricultural clubs and agricultural papers. Magazines devoted to agriculture and its kindred sciences are now so numerous, so cheap and so well conducted, that no farmer can offer an excuse for not subscribing to one or more of them. We would modestly recommend to every farmer our own *Maryland Farmer*, a magazine with a large circulation, and furnished one year for \$1.50. Can we not appeal to the District Clubs, as well as the Kent County Society, to take an interest in extending our already large circulation in that county? Let the effort be made.

NORWAY OATS.—We have received three splendid stalks of the Norway oat, raised on the farm of Caleb Stabler, Montgomery county, sixteen miles from Washington city. One of the stalks measured 5½ feet, the other two 4½ feet; the stalks in circumference 1½ inches. The heads were all well filled. We did not go through the tedious process of counting the grains, but they were abundant and full. The land upon which they were raised cost originally \$2.05 per acre.

Early Rose Potatoes---Buckwheat and Lime.

LOTHIAN, KING GEORGE COUNTY, VA., }
July 19th, 1870. }

To the Editors of the *Maryland Farmer* :

I send you, per steamer Wenonah, a small box of early rose potatoes, to let you see that we can raise good potatoes here in Virginia. I planted a half bushel the 27th of March; I commenced using them the last day of May, and have had plenty for my family, which is large; also gave them to the field hands plentifully. I dug last Thursday, and got 18½ bushels.

I have sown some buckwheat on a lot that I wish to improve, which I intend to lime. When will be the right time to apply it? when I turn the buckwheat under, or top-dress during the winter, after the wheat is up? I intend seeding it in wheat in fall.

Yours, very respectfully,

L. A. COGHILL.

ANSWER.

We reply, that we should prefer to broadcast the lime when the buckwheat is ready to be turned under, and plough both in *lightly* together. The action of the lime on the rotting buckwheat will aid materially in fertilizing the soil. If the lime is used as a top-dressing in winter, a part of its effect will be lost. Better turn it under with the buckwheat, *but not deep*.

We received the potatoes sent us, which were very large and very fine, and were fully discussed by the household, and verdict rendered, "none better." You have our thanks, and we consider Old Virginia "some" on the *tater*.

THE EGG TRADE.—Few persons understand the magnitude of the egg trade of New York city. The receipts for nine months of 1869 averaged at least *one thousand barrels* per day. A barrel contains about 80 dozen, or 960 eggs; the aggregate, therefore, was in one day nearly a million. One thousand barrels of eggs, at an average price of 30 cents per dozen, amounts to 24,000 per day, or \$8,790,000 per annum.

SHRUBS IN DRY WEATHER.—Shrubs are likely to suffer as much in time of drought as smaller plants. The larger and more leaves they have, the greater the evaporation of moisture; consequently the more need of a supply at the roots. If shrubs show signs of wilting, give the soil a good soaking with water, then cover the surface for two or three feet about the stem with some kind of mulch. Hay, straw, leaves, or even two or three old newspapers, if nothing else can be found, will do good and often save from dying.—*Hearth and Home*.

Much vegetable matter is not good for grain, as it does not sufficiently strengthen the straw.

PROGRESS OF AMERICAN DAIRYING.

Mr. X. A. Willard, in a review of the progress of American dairying, states that Herkimer county, New York, is the oldest dairy district in America, the first cheese dairy being established there nearly eighty years ago. The American dairy now represents a capital of more than \$600,000,000. The cheese product of 1867 sold for \$25,000,000, and the butter product for more than \$100,000,000. In 1864 the butter product of New York alone was nearly 85,000,000 pounds, and the cheese 72,000,000 pounds—the value of the two products being, at a very moderate estimate, more than \$50,000,000.—The wheat crop of the State in 1864 was 6,000,000 bushels, oats 19,000,000, rye 2,000,000, barley 3,000,000, and corn 17,000,000. The product of the New York dairies, therefore, sold for more than the entire grain crop of the State. The wool-clip that year was not quite 16,000,000 pounds, which, at \$1 per pound, amounted to less than one-fourth that from the dairy. If we add the value of the pork made from whey, the calves raised, and the beef and milk sold, we can hardly place the annual product from the dairy farms of New York below \$100,000,000.

In 1840 the value of the dairy products of New York—butter, cheese, and milk—was estimated by the United States census at only \$10,496,000; and in all the States about \$34,000,000. In 1850 the product of butter in all the States and Territories was 313,345,306 pounds, and the cheese 105,533,893 pounds. In 1860 the butter product had reached 469,681,372 pounds, and the cheese 103,663,927. The value of these products in 1860 could not have been less than \$200,000,000 pounds, half of which was made in New York.

The cheese product of Great Britain in 1867 is estimated at 179,000,000 pounds. The amount of Dutch cheese sent to England in 1866 was 80,000,000 pounds. An approximate estimate of the annual consumption of cheese in Great Britain is 309,000,000, as follows: Home-made, 179,000,000 pounds; from Holland, 80,000,000 pounds; from the United States, 50,000,000 pounds.

The consumption of cheese in the United States and Canada is estimated at about 160,000,000 pounds per annum. This makes 469,000,000 pounds for Great Britain and America. Against this demand we have 179,000,000 pounds made in Great Britain, 200,000,000 pounds in the United States, and 15,000,000 pounds in Canada—total, 394,000,000 pounds. Deficiency for the supply of the two nations, 75,000,000 pounds. It is stated that France is competing with England for Dutch cheese, which must decrease the imports into Great Britain from that source. On the other hand, Sweden is enter-

ing the field as a dairy district, and will hereafter compete with the United States in the English markets. All these facts seem to indicate that there is danger of pushing the cheese dairying of America beyond ordinary consumptive limits.

In regard to the quantity of cheese needed abroad, the secretary of the London Board of Trade writes that the Americans should bear in mind the fact that Great Britain doubles in population every forty years; and hence the consumptive demand for cheese will increase in that proportion. This consideration, with the fact that there is great probability of a very important decrease in the manufacture of English cheese from year to year, gives hope that the dairying business may be sustained in this country if our people continue their efforts to improve the quality of both butter and cheese.

HOING IN GENERAL.—The objects of hoeing are various. Sometimes we hoe to kill weeds; sometimes several of these objects may be attained at once. Whatever the object is, be careful to keep it in mind, and hoe so as to accomplish it. Cut the weeds entirely off; do not simply cover them up. If you wish to soften the soil with the hoe, chop it fine, and do not grudge strength. If you are hoeing in seeds, move the entire soil. If you are covering manure, put it just where you want it, and cover it all up.

The hoe should not be used where the horse-hoe or cultivator can be, for it is a waste of human strength; but where the cultivator cannot go, the hoe ought to be used. In the best culture, hoeing or cultivating of some sort should be done every ten days, till the crop shades the ground; it should be done oftener in dry weather.—*Ohio Farmer*.

PATENT COW MILKERS.—Mr. Reade, (of the Farmer's Institute,) asked if any one present had any experience with these contrivances. Mr. Curtis said he did not know of a single dairy in the State that used them; if they were good for anything they would be used. Mr. Parsons said that some time since he visited a man who milked three hundred cows, near Philadelphia, and was using these milkers. Asked if he liked them, and he said he would not do without them; they milked well, the cows seemed to like them, and they did no injury. Mr. Parsons knew nothing about them by experience himself. Mr. Gregory asked if the near Philadelphia gentleman was interested in the sale of the patent right. Mr. Parsons did not know.

AMERICAN SUMAC is a fourth stronger than European, and can be gathered in great quantities, yet some of our tanners import from Sicily, paying \$135 per ton.

Horticultural.

ORCHARD CULTIVATION OF THE PEACH.

FIRST TRIMMING.

When the trees are planted in the fall, it is preferable to leave a few branches toward the top of the stem. They serve as a sort of shield to frosts of winter. When planting is done in the spring, the tree should be trimmed close and smooth, like a rod, every limb taken off, and the tops cut down to a uniform height of not less than two feet and a half, nor more than three and a half. Three feet is a very good height. Those planted in the fall should be treated in the very same way in the spring following. This should be done as early in the spring as the weather will admit, as it is desirable to confine all the ascending sap to the stem, and not let it be wasted in the branches which are to be cut off. Some uninformed and inexperienced planters often leave a few branches, hoping thereby to induce earlier fruiting; but it has no such effect, but rather retards it; for it should always be remembered, that fruit is *only* produced on wood of the previous year's growth; so that these branches on the trees, when planted, never can produce fruit, unless it be the first season. This very seldom occurs and is *never* desirable.

CROPPING.

The usual crop cultivated in a young peach orchard, is corn—small grains, never. It is believed that if the ground was merely cultivated between the rows, kept loose and clear of weeds and grass, the young trees would make more rapid growth; and to cultivate with low vegetables, such as potatoes, cabbages, and so forth, would be better than corn. But it is too long to wait for a return, to leave the ground idle until the peaches come in; and the acreage is too great to cultivate it all in potatoes or other root crop. It is, therefore, cultivated in the favorite crop, corn. And this is perhaps the best after all, as the injury to the young orchard is but slight, while the return is considerable.

The ground is prepared in the spring as any other. It is ploughed, harrowed, sometimes rolled, and then marked out and planted, with *four rows* between each row of trees. It is done in this way: Run a furrow for a row of corn four feet from the row of trees; then another four feet from that one; a third four feet from the last, and a fourth four feet from the third. The distance will count thus: From row of trees to first row of corn, four feet; from first row of corn to second, four feet; from second to third row of corn, four feet; from the third to the fourth, four feet; and from the

fourth row of corn to the next row of trees, four feet—in all, twenty feet. As no furrow can be run between the trees and on the same line, the spaces are filled up by hand and hoe, without any furrow. It will be seen from this, that each tree occupies precisely the space of one hill of corn; that is, a square, each side of which is four feet. This is sufficient the first season; the second, the rows may be reduced to three; the third, to two; after which, if the orchard has grown well and comes into bearing, it will not be desirable to crop it at all. But planters often cultivate four rows all the while.

SECOND TRIMMING.

In the month of June, after planting, an intelligent and careful man should go through the orchard with his pruning knife, and lop off every limb and sucker nearer than two feet and a half to the ground. He should also cut in any straggling limbs that have gone far beyond the general contour of the head. It will also, in some cases, be judicious to thin out some, on one side or the other, in order to give the tree a proper balance and handsome shape. It is of great importance that this work be timely and properly done; for if the suckers and low limbs be not cut off, they will not only spoil the shape of the tree, but exhaust its strength and greatly retard its growth. If the trimming is timely and judiciously done, the limbs that are left will grow strong and vigorous, the wood will ripen early, and the vitality of the tree be preserved.

At the time this trimming takes place, if any diseased, scrubby, or incurably ill-shaped trees are found, they should be carefully noted, in order that they may be replaced the next fall. This should be done thus: Let the pruner have a little memorandum, and enter therein the number of such trees in each row, giving also the number of the row and the variety. By this means the planter will know exactly how many trees of each variety he will need, and in what rows the vacancies occur, and all without the expense and trouble of a recount.

The more effectually to insure the proper substitution, the faulty trees should be pulled up, broken down, or otherwise destroyed.

HEIGHT OF HEAD.

There is some diversity of opinion in regard to the height of the head of a tree; or rather at what height the head should be allowed to commence to form. We think *three feet* the proper height. Allowing the limbs to stand at this point, they will naturally strike upward at an acute angle with the stem, and thus allow room enough to cultivate around them with a mule or low horse. And this is important to the cultivator; for if the trees, instead of being ploughed around, have to be dug or

spaded, the expense will be considerably increased.

The arguments advanced by those who advocate low heads are two: First, that the fruit is nearer the ground, more easily picked, and not so likely to break down the branches; second, that the low heads withstand the storm better, and are not so easily blown down. But the answer to all this is, that when the heads are low, the fruit does not ripen early or well on the low branches, and is generally small in size and inferior in quality. In time, the lower branches, for the want of sufficient air and light, die, and have to be removed, thus leaving the tree with less bearing wood or in worse shape, than if it had been trimmed up to the proper height at first. In regard to the exemption from injury by storms, it is ascertained, from experience and observation, that very few trees are ever blown down, or even injured by ordinary storms, and as to tornadoes or hurricanes, low heads give no protection. It is admitted the fruit can be more easily gathered from low than high trees; but this advantage is but slight, and no adequate compensation for what is lost.

The character of the head is formed the first year, and it will need but little attention thereafter. The trimming directed for June, however, should be repeated about the last of August. If well done on those two occasions, all that will be necessary in subsequent years will be to cut out dead and broken branches. Peach trees do not form close, compact heads, like apples and pears; and, consequently, do not need thinning.

CUTTING-IN.

Some maintain that the peach tree should be *cut-in annually*. This is done by cutting off about one-half of each year's growth the same season, or early the next spring. When the sap reaches this point, it is, of course, checked, and sends out several new branches, instead of following the old one, as it would have done had not that been cut-in. In this way, more bearing wood is produced nearer the main stem and nearer the ground. We believe it is an advantage; and, in the case of young trees, may do very well; but when the trees attain full size, it would require much labor, and be attended with considerable expense; and, taking into view the fact that the trees hardly ever bear three years in succession, it is believed that cutting-in would not pay. For garden culture, or even small orchards, it may be adopted; but when trees are counted by thousand, and tens of thousands, few will find it convenient or profitable. There is still another advantage claimed for cutting-in, and which we do not wish to undervalue. It is, that it invigorates and prolongs the life of the tree. We think this is so, and that a tree cut-in annually will remain longer thrifty than one not so treated. The

leaves will be greener, the young bearing wood more abundant, and the fruit larger and richer. But in a congenial soil, where orchards are nearly as easily renewed as strawberries, and where the trouble and expense of cutting-in are considerable, it will not be often resorted to.

PLOUGHING.

The orchard should be ploughed at least twice during the year—once between the middle of April and the middle of May, and again between the middle of September and the middle of October, each time with a small plough. A small plough is preferable, because it can be easily handled and guided among the trees and about the roots without injury; and also because a large plough makes the furrows too deep, and thereby cuts the roots. The furrows should be narrow, so that the ground may be well broken. The rows of trees are first ploughed around with a low horse, or made so that he can walk close up to the trees. The single-tree used should not be more than eighteen inches long, and the ends should be covered with stiff leather shields. The horse should be muzzled, to keep him from biting the trees. Both these precautions should be taken whenever an orchard is ploughed, but in ploughing amongst young trees it is doubly important. The furrows in the spring are thrown *from* the tree; in the fall *towards* them. The reason of this is, that in spring, when growth commences, it is not advantageous, but rather injurious to the tree to have any soil packed around it. The light and air are wanted to act on the roots. The rains also trickle down the branches and stems, and thus reach the roots. A pile of earth, therefore, around the roots *sheds* the water and prevents its proper distribution. But in the fall, after the growth has been made and the fruit gathered, the tree needs rest, the less water about the stem the better. The earth thrown up about the roots is then a positive advantage, as it not only sheds the winter rains in some degree, but it also serves as a mulch to protect from injury. This tender part is what is called the "neck," and extends about an inch above and two below the surface. Here, then, is a constant ebb and flow of heat, and operating in contrary directions at different seasons. In summer the air is warmer than the earth; but in winter, colder. The surface line marks the limit of these two influences; and from their constant fluctuations, it is always a tender point and liable to be attacked by disease.

In ploughing around the trees, about two circuits are made. The *middles* are then broken up with two horses or mules, and a somewhat larger plough; but a very large plough should never be used. When the ground is thus ploughed, it is

carefully harrowed, or cultivated down, until every clod is broken, and the whole surface left as smooth as a garden. In doing this, one horse and a small harrow is used around the trees, and two horses and a larger one in the middles. In wet seasons, foul land, or very rich soil, the cultivations may have to be repeated oftener than have been mentioned heretofore in this chapter.

[The above chapter we extract from James Alexander Fulton's *PEACH CULTURE*, published by Orange Judd & Co., New York. This volume contains about 200 pages, and fully treats upon every subject appertaining to the culture, &c., of the Peach. To show its comprehensive character, we give the captions of the several chapters, as follows: Site of Nursery; Seed; Seed-Bed; Preparation of Ground for Nursery; Planting the Seed; Nursery Cultivation; Buds; Twigs; Budding, &c.; Cultivation of Buds; Taking up and Sending to Market; Selecting a Site for an Orchard; Planting an Orchard; Orchard Cultivation; Coming in; Baskets and Crates; Transportation; Consignees; Ladders; Shipping; Picking; Returns; Markets; Profits; Insects and Diseases; Special Culture; The Peach House; Varieties, &c., &c. The volume is numerously illustrated. For sale by the BALTIMORE NEWS COMPANY, Sun Iron Building, Baltimore. All interested in Peach Culture should secure a copy for their library, as it is the best rural hand-book yet issued.]

REVIVAL OF PEACH TREES.

The Philadelphia *Ledger*, announces a discovery of no small moment in the interests of agriculture that has been made by Dr. George B. Wood, and communicated by him to the American Philosophical Society, of which he is President. Peach trees in this vicinity, after producing a few crops, not only cease bearing, but perish themselves in a short time; whereas their natural life is fifty or sixty years, or more. The cause of this defective power of growth is believed by Dr. Wood to be owing to a deficiency of potash in the soil, and he assures that if this alkali be supplied to the tree so that it shall reach the small roots and be absorbed, the fruit-bearing power is restored, and the tree itself, if prematurely perishing, is revived. Believing with most persons that the cause of the decay lay in worms at the root of the peach tree, he put in operation a plan which he had seen his father perform more than fifty years before, viz: of digging around the base of the stem a hole four or five inches deep, scraping away all the worms that could be found at the junction of the stem and roots, and filling the hollows thus made with fresh wood ashes from the fire, which, of course, retained all their potash. This was done in the autumn of 1863; and with a result, in the following spring, at which he was himself astonished. The trees appeared to have been restored to all their early freshness and vigor; they put forth bright green leaves, blossomed copiously, and bore

a crop of fruit such as they had never born before, many of the branches breaking down under the load of the peaches. Dr. Wood, in reflecting on these results, and noticing that several of the peach trees treated had no worms, came to the conclusion that we must look for an explanation to some other cause than the destruction of a few worms, and this cause he believes to be the ashes, the potash of which being dissolved by the rains, had descended along the roots to the rootlets, and presented to them the very food for want of which they were dying.

Decaying apple trees bearing stunted and inedible fruit have been revived by a similar process, and with the like results. All of Dr. Wood's orchards give promise of an abundant supply of fruit this season.

APPLE TREE TWIGS DYING.—J. B. Buchanan writes: "What is the matter with my apple trees? The twigs commence dying all over the tree, and finally, in the course of a year or two, the tree dies. I have lost some fine trees; also my neighbors. Will some of the correspondents of the *Rural New Yorker* give cause and cure?" We have seen the twigs of apple trees die in the manner described, caused by the boring of apple-twig borer, (*Bostrichus bicaudatus*.) We have rarely or never seen trees die from these operations, however. We think it more likely to be the twig blight. We do not know that the cause is known, nor that a remedy has been discovered. We should cut off all twigs affected, as soon as discovered, and burn them.

CARTER'S FIRST-CROP PEA.—This is not one of the newest peas, but, having tried it for the first time this year, I wish to say a word in its favor.

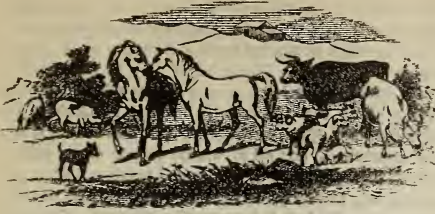
It is a good grower and a good bearer, and, with me, seven or eight days earlier than the Daniel O'Rourke.

Planted April 1st, in light sandy soil, and manured only with a little guano at the time of planting, and a little ashes scattered along the rows when the pods were filling out, it gave peas fit for shelling June 14th; and by June 23d, the whole crop was gone.

Daniel O'Rourke, planted April 2d, in the same soil, and receiving the same treatment, was not fit for the table before June 22d.—F. M. M., Jr., in *Tilton's Journal of Horticulture*.

Those who have favorite cut flowers to preserve should change the water daily in which they are set, and cut a thin slice off the stalks at every change. Water containing a small quantity of camphor, dissolved in spirits of wine, will often revive flowers that have begun to fade.

Live Stock Register.



FATTENING STOCK.

We feed our animals to get them fat as soon as we can, with as little trouble and as little expense as possible. There are various ways in which this is done. First, breed is of considerable importance, and cannot well be overlooked. The Short-Horns are selected for this, and are decidedly preferable. There are others good; some because they lay on fat more readily, and others because they digest their food better. All these things are to be considered.

As to the feed, there are various opinions. In England, they feed, differently from what we do here. It is because they understand it better—understand cattle better. They use roots more than we do, turnips in particular. This we may add to our feed, and should, as it has an influence on the sanitary condition of stock. But in England the turnip is raised, largely as it is, not altogether for the immediate benefit of feeding, whether for fattening or otherwise, but as a crop favorable to the soil, affording manure and benefiting the land by tillage; also, aiding in rotation.

With us the treatment is different, and quite various, take the whole community through. The result is, we have not that uniformity and general good condition of beeves that we find in Great Britain. Still we have exceptional cases. We have also the English feed in some instances. The English feed is good, but is sometimes carried too high. High feeding improves the manure—what the English want; not that they aim specially at this, as that would be simply changing grain into manure so that it may be changed back again, into grain. It will do for the straw and waste matter to be thus treated, but not the grain itself.

Turnips are fed at the rate of one hundred to one hundred and fifty pounds a day in England to fatten cattle. As nine-tenths of this food is water, the impropriety of feeding such diluted food will at once be seen. But a reform is taking place in this respect, it seems. Experiments have been made the past winter that reprobate this practice. From forty to seventy pounds, it is found, is much more

beneficial. More straw or hay is fed—generally chopped straw—and water is now required, which was not the case in the former treatment.

Here is an improvement, and the American system approaches this—only we feed corn; this is the main stay. And so far as we can see, we have the advantage here. We certainly have in the West, where this grain is cheap. If we do not fatten our animals as well as is done in England, neither does it cost us as much. But whether it costs more or less, or however much it may be, certain it is that a great improvement may be made with us in fattening cattle.

We are apt to over-feed when we put up to fatten; we feed too much of the strong, concentrated, rich food, corn. This wants to be diluted; and this can be done so as to meet various advantages. The health of the animal, vigor of digestion and assimilation, may be improved, and thus fit the machine for a more efficacious use. Roots, straw, (or hay,) oil-cake mixed with straw or hay, (cut,)—these will have the desired effect. The turnip no doubt has its good use; so have other roots. Good, tender, well cured hay may be made a substitute for most of these, or all. This, with corn meal, will probably do as well as almost any course that has been practiced. A little oil-cake and a few turnips for variety, or the oil-cake as a regular (small) feed, may be of benefit. But we do not know but that, all things considered, the grass, and the corn alone, will do well. There is certainly not much difference.

But let us never lose sight of this; that the comfort of the animal must be considered. Good, convenient, warm (in winter,) and well ventilated quarters are necessary. And let us not forget another very important thing,—one of the most important,—this is, not to over feed.

It is the one great fault in our fattening stock. The digestive and assimilative functions become disordered, the appetite suffers, and a corresponding lack of the conversion of food into fat must inevitably follow. Do we not see this often? The discriminating see it and take advantage of it. Besides, as before stated, much of the value of the food in its nutriment passes off into the manure. The stomach could not digest it, and so threw it off as a foreign substance. Here is a loss two-fold—that which goes into the manure and the time lost in fattening.

Judgment, care, an interest in the well-being of the animal, are important elements in the fattening of stock. Avoid then, over-feeding; look to the health of the animal; and then by a liberal, regular course of feeding, having reference to appetite, ease, and the general regimen of the animal, there will be no lack of success.—F. G., in *Rural New Yorker*.

COTSWOLD SHEEP.

The Cotswolds are a large hardy breed of English sheep, big boned, and long wool, and well adapted to hill range. Mr. Wm. Weld, of Ontario, Canada, is a breeder of these fine sheep. Our farmers will find the Cotswold sheep a hardy race that will stand more exposure than most other breeds, and they yield more wool of a good quality than any other breed, therefore, their large carcass and large quantity of wool that they turn off, make them a very profitable breed. Cotswolds are extensively employed for the improvement of other breeds, and are preferred by all sheep breeders for their large size and superior hardiness. Cotswolds are noted for their large dimensions, and have a propensity to fatten, arising chiefly from their wide frame; quietude and open texture of flesh which is of quick growth and, consequently, expands itself more rapidly than in sheep of other qualities.

Cotswolds have for many years been sought after with a view to increase the size, and form and wool qualities of our small sheep, and already the influence of the Cotswold blood can be seen in the sheep of this country, and these crosses are eagerly sought after for breeding and for fattening for the butcher. In taking a general survey of the sheep of this country, I cannot see why farmers will persist in raising the small sheep that has no carcass to feed on, and one that only turns off two or three pounds of wool, when they can get sheep that will weigh from two to three hundred pounds, and turn off from six to ten pounds of wool, and long wool that an increasing demand calls for each year; according to the situation of the farm and the nature of the pasturage must the sheep farmer manage his flock. Perhaps common Merino, Southdown, Bothwell, and their crosses, will be found good, but on good land and good pasturage, the Cotswold strain should be preferred, if he wishes to have due hardiness and fertility, and the increase of weight and wool.—*Am. Stock Journal*.

WHEN SHOULD MARES BREED.—Joseph Wood writes the *Rural*:—"A mare should not be used for breeding until five years old. Old age does not make any difference, if the animal is sound, and of a good constitution. By all means use your best mares. I have a colt foaled June 2d, 1868, that was awarded three first premiums last fall, successively, by the Winfield Union, Brookfield, and Sangerfield and Marshall Agricultural Societies. The dam is twenty-two years old, and now, at the age of twenty-four, is with foal."

TICKS ON SHEEP.—Take hog's lard and salt in equal proportions; mix together and warm till melted. When you shear your sheep apply this to the back, from the ear to the tail. The ticks will soon leave. I have tried it for a number of years and have never known it to fail.

USEFUL RECIPES.

FOR SWEENEY IN HORSES.—We have used the following liniment with perfect success, and have never known it to fail in any of the numerous cases of Sweeney to which we have seen it applied. We think it may be considered a certain cure, unless in instances of very long standing where nothing can successfully reach it: Alcohol, 1½ gill; turpentine, ¼ do; hartshorne, ¼ do; sweet oil, ¼ do; oil of organum ¼ do; oil of wormwood, ¼ of an ounce.

The above mixture is to be applied twice a day to the part affected, carefully, as wherever it comes in contact with the skin, the hair is temporarily removed. Keep the part well greased if it becomes sore, and after a few applications drop off twice a day to once in two or three days, until the liniment is used up.

CRIBBING HORSES.—Wind sucking and crib biting generally go together. We believe the most frequent cause of crib biting is idleness. Every one who is accustomed to horses must have noticed the tendency which many horses show to gnaw the manger and the side of the stall when they are kept standing in the stable without doing any work.

A wind sucker generally seizes hold of some part of the stall or manger with his teeth when he swallows air, and if the sides of the stall are perfectly level, and there is no manger in front of him, he is thus prevented from indulging in his habit. It is inconvenient, however, to keep a horse to a stall without a manger, though most certainly deprives him of anything upon which he can seize with his teeth. Another, and a very effectual plan is to make the horse wear a muzzle during those times when he is not fed.

DISEASED FEET.—I have a horse that has feet that smell very badly in the frog or sole. What is the cause and remedy?—ANS.—The fetid smell must arise from chronic inflammation of a portion of the sensitive sole. The sole of the foot should be well pared and the foot stopped with a mixture of tow and tar, which can be retained in its position by two thin pieces of wood crossing from one side of the foot to the other, and resting on the upper surface of the web of the shoe.

WORMS IN HORSES.—The first effort in treating a horse for worms should be to restore or improve the vigor of the system by nutritious food; give also a bran mash twice a week. Of pure medicine administer a pint and a half of linseed oil, and repeat the dose every ten days for three times. Give also a drachm of powdered sulphate of iron every night for a fortnight.

FOR HORSE'S COUGH.—Mix up an ounce of extract of belladonna in half a pound of molasses and smear a tablespoonful of the mixture on the horse's tongue three or four times a day. There should be enough to last for a week. Avoid feeding dusty hay or oats, as food of that kind is apt to produce irritation of the lungs.

FOR BIG JAW IN HORSES.—Make a liniment of gum camphor and alcohol, rub it well in, warming it a little first. Rub frequently and persistently—rub—rub—rub—this will stimulate circulation, and produce healthy action in the part affected.

FONDER IN HORSES.—As soon as you find your horse foundered take one tablespoonful of pulverized alum, throw well back in the horse's mouth; it will mostly effect a cure; keep from water during the day. In every case that we have tried, it has proved a sure cure.—*Am. Stock Jour*,

The Poultry House.

GEESE--THEIR PRINCIPAL VARIETIES.

Having been a breeder of geese for the last fifteen years, I will give some of my ideas and experience with them, and will commence with the group of which the Chinese goose is the type.

THE WHITE CHINA GOOSE, is the most beautiful, graceful and attractive of all. It is a native of China, as the name implies. The imported goose is very small, has a more slender neck, and finer form, than those now bred here. It is pure white, with legs and bill of a bright orange-red color, with a large knob at the base of upper mandible. It is very stately and erect in its carriage, a good layer, generally commencing in January and often laying from forty to fifty eggs in a season; during the last ten years this species has increased in size at least one-third and has become coarser.

THE BROWN CHINA GOOSE is the same in form as the white. In color brown with a dark stripe down the back of the neck, bill and feet black. It is very handsome, not quite so good a layer as the White.

THE MOTTLED CHINA GOOSE is a cross of the White and Brown. The only objection to these geese is, that they keep up an incessant and disagreeable screaming.

THE HONG KONG GOOSE, is another variety from China, a little larger than the last mentioned, which it resembles very much, but has a dewlap, and the legs are of a red color. This kind was much liked some twelve years since, but I have not seen or heard of a specimen for several years.

THE WHITE SWAN GOOSE, resembles the white China goose very much, but is larger and has a dewlap. I believe it to be a cross of the White China and Hong Kong.

THE POLAND GOOSE, is very like the Brown China, but the stripe down the back of the neck is lighter, the neck is a little shorter and much thicker. I think it is a cross of the Brown China and African and unworthy of propagation.

THE AFRICAN GOOSE. This variety is supposed to be a native of Africa. It is larger than any I have mentioned, weighing forty pounds per pair. In color it is brown grey, the head and back of the neck very dark, the head is shorter and more square, the neck shorter and thicker than the China. The legs are black, the bill black and knobbed, and under the throat, there hangs a sort of fleshy membrane or dewlap. But few specimens are to be found here at present, though they were quite numerous a few years since.

THE BREMEN GOOSE, sometimes called *Emden*, is a native of Holland, and is one of the most useful

of all varieties. It is very large, pure white, has prominent blue eyes, is remarkably strong in the neck, and the feathers, from near the shoulder to the head, are far more curled than those of any other. Its bill is yellow, and its legs orange. It commences to lay in March, and lays from twelve to sixteen eggs. The quality of its flesh is very superior. The weight of the prize takers at the last show at Birmingham, England, was 53½ lbs. for the old pair and 50½ lbs. for the young pair.

THE TOULOUSE GOOSE, is a native of the south of France, where it is reared in perfection, and its flesh is very highly valued. It is the largest of all varieties, its body nearly touching the ground, its color is grey, bill yellow, legs and feet orange. It is but little known in this country, having been but recently introduced. I am informed by Frenchmen that "in France its flesh is thought to be the best food for invalids, being more delicate and easy of digestion than chickens." One imported goose of this variety that I have, commenced laying this season on the 13th of Feb., and laid thirty-six eggs. I set the eggs under hens, putting four under each. They hatched very well, and prove to be the strongest and hardiest goslings I ever had. Of one of these eggs I have an unprecedented fact to record. It was larger than the others and I did not expect it to prove fertile, however set it as an experiment; much to my surprise 12 hours after the others were hatched, I found

TWIN GOSLINGS.

in the nest; this one egg had given me two birds. Although the twins are a little smaller than the rest, they are perfectly healthy and strong. The weight of the prize Toulouse geese at the last Birmingham Show was 57 lbs. 14 oz. for the old pair, and 48 lbs. 14 oz. for the young pair. The prize gander of 1868 weighed 37 lbs.

A few years since, the rearing of a pair of geese, that would weigh half a hundred weight, would have been regarded as an impossibility; this limit has now been surpassed, and we can not now believe that the "ne plus ultra" has been reached. I believe a cross of the Toulouse and Bremen, would make the best of all geese for market, and that the goslings would average twenty pounds each at Christmas. This would be an improvement worth making, as our common market geese, now hardly average eight pounds. This change would soon take place, not only with geese but with all kinds of poultry, if our farmers would consider the importance of the subject, and take a little pains in procuring the best varieties for breeding stock. I hope the time will soon come when poultry breeding will be considered of the importance that it justly merits.

--The Poultry Bulletin.

The Apiary.

Progeny of the Queen Bee.

A gentleman discussing this subject in the *Canadian Farmer*, writes as follows:

A QUEEN LAYS BOTH IMPREGNATED AND UNIMPREGNATED EGGS, PRODUCING WORKERS AND DRONES.—Dzierzon, a noted apiarian of Germany, was the first to make this discovery. At first, however, few apiarians would accept it as true, but now it is almost universally acknowledged to be correct. That drones are the production of unimpregnated eggs is easily proved by confining the queen in a hive where there are no drones until she commences to lay, and it will be found that though she was never impregnated, yet her eggs all produce drones, and drones only. Again, if a queen is reared late in the season, after the drones are all destroyed, such a queen will always prove to be a drone laying queen; not having been fertilized she will lay unimpregnated eggs, and they are always found to produce drones. On the other hand, as soon as a queen is impregnated, she lays eggs which produce workers and yet at the proper time, when drones are required, we find her laying eggs which produce drones, hence they must be unimpregnated eggs.

It will be remembered that when a queen is fertilized, the seminal fluid is received into a sac, the mouth of which opens into the oviduct through which the eggs pass to be deposited in the cells.

Dzierzon concluded, therefore that the eggs that produced workers were brought in contact with the mouth of the seminal sac, and received a minute portion of the seminal fluid, whereby they were impregnated or fertilized; while the egg that produced drones passed through the oviduct without coming in contact with the seminal sac. In order to prove this, it was necessary to ascertain if the eggs in both ovaries or egg-bags of the queen were unimpregnated. A microscopic examination proved such to be the case. It follows, then, that eggs that produce workers are impregnated after leaving the ovaries, on their way through the oviduct, by coming in contact with the mouth of the seminal sac, while eggs that produce drones pass without coming in contact with the mouth of the sac, proving Dzierzon correct.

It will be readily seen, that such being the case, if a pure Italian queen mates with a common or black drone, her drones will be as pure as herself, as none of eggs that produce drones come in contact with the seminal fluid received from the black drone; while her workers will be hybrids, partaking both of the nature of herself and the drone with which she mated.

We would call the attention of all interested to the following address, issued by a number of representative gentlemen, proposing to organize a Southern States Agricultural Congress. It will speak for itself.

AGRICULTURAL CONGRESS,

TO BE HELD IN THE CITY OF AUGUSTA, GEORGIA,
OCTOBER 26TH, 1870.

The necessity of co-operation amongst the Agriculturists and Agricultural Organizations of the Southern States is becoming more manifest every year. Public improvements, the diffusion of Agricultural Science, and the protection of the rights of Agriculturists have not hitherto received the attention which subjects of such vast importance to our prosperity demand, and which are best secured, by voluntary association and combined action.

The interest of the cultivators of the great staple productions of the Southern States demand a Central and United Organization, the object of which shall be the promotion of improved methods of culture (specially adapted to the productions peculiar to our section,) the improvement of our Labor System, the encouragement of Foreign Emigration, and the diversification of our Agricultural productions.

A general desire for an organization with these objects in view is expressed by leading Agriculturists throughout the South.

It is, therefore, proposed to organize an Association, which shall meet annually at some accessible point in one of the Southern States, where Agriculturists from every section shall assemble, to deliberate in council, and fully communicate the result of their experience as tending to the advancement of the arts of husbandry and kindred subjects.

It is suggested that the initiatory assembly convene at Augusta, Georgia, during the holding of the great Fair of the "Cotton States Mechanics" and Agricultural Fair Association," in October next.

In furtherance of the foregoing, the undersigned have been appointed a joint committee from the Cotton States Mechanics' and Agricultural Fair Association, and from the Augusta Board of Trade, to make all necessary arrangements for the first meeting, which will be held in this city, October 26th, 1870.

The several States and County Organizations throughout the country are cordially invited to send Delegates.

The first business before the assembly will be the permanent Organization of an Agricultural Congress—election of officers, &c.—to be followed by free discussion of Agricultural subjects.

The central location of Augusta, and its extensive railroad connections, make it easy of access from all parts of the country.

Arrangements are made with the various railroads to carry Delegates free of charge, or at reduced rates.

Delegates, in order to avail themselves of this privilege, will have to present duly authenticated certificates of appointment to the Agricultural Congress.

Associations are requested to report, as early as practicable, the names and number of delegates they may appoint.

All communications will be addressed to Mr. E. H. GRAY, Secretary Cotton States M. and A. Fair Association, Augusta, Ga.

WM. H. TUTT, Pres't C. S. M. and A. F. Association.
EDWARD THOMAS, Pres't Augusta Board of Trade.

M. L. BONHAM, South Carolina.

P. J. BERCKMANS, Augusta, Ga.

T. P. BRANCH, Augusta, Ga.

PROTECTION AGAINST DROUGHT.

In tillage, the best protection against drought that can be conveniently practiced to any great extent, is frequent stirring of the earth so as to keep it loose and light. In this way the earth at the surface may be divided into many particles which serve as a non-conductor of moisture, and retain it below where the roots may obtain a supply.

On the contrary, when the earth is hard and compact, the moisture is readily conducted off through it even to a great depth in a very dry time. As an illustration, if one end of a bar of iron be placed in the fire the heat will readily pass to the other end; but if the same bar be cut into pieces of one inch or less in length and laid along end to end as in the bar, they would touch in some places, while in others a thin strata of air would intervene, and in beating one end the other would not be affected, as the heat would pass but a short distance through the short pieces.

Again, we will suppose that a fire of intense heat be made on a block of iron four feet square and ten feet high; the body of the iron would soon become heated even to the bottom. Now, if this iron should be cut or broken into fine pieces and a body of iron formed of these pieces of the same size as the block, and a fire of a like degree of heat made thereon, the heat would work down slowly after penetrating a small distance through the many particles, and the air intervening between them. We give this as the theory, but it is the practice, as in all other things, that we rely on as the foundation of true science.

There is even in a dry time a great quantity of moisture in the earth that is continually rising and passing off in evaporation, and if this evaporation can be prevented in any great measure by a non-conductor of moisture at the surface, the plant will suffer comparatively little. This is abundantly shown in practice. Those who have not witnessed, from experiment and observation, the advantages of fine loose earth on the surface, as a protection of plants against drought, would not be likely to suppose its effects so great as they are, though the theory is plausible and reasonable. Corn and other vegetables which have been well hoed in an extremely dry time have flourished well, while other parts, left for experiment were nearly destroyed by the drought.

I noticed last season the powerful effects of this protection: In cultivating a few acres of high land (where the drought under usual circumstances would have been very severe,) where the soil was frequently stirred and kept loose and light on top, there was constant moisture at a short distance from the top, but where the earth was unmoved it dried to a great depth.

A narrow strip running across the piece was left for turnips and remained unplowed. On this strip the soil became dry below the usual depth of plowing and the weeds were almost dead for want of moisture, while weeds of the same kind on the edge of the plowed ground were fresh and vigorous, and the soil was only dry for a few inches in depth.

Where some grain was sown the earth was dry down some six or seven inches, while by the side of it where the soil was often stirred it was dried down only three or four inches. In the latter case the earth had a good degree of moisture, while in the former it contained but little.

A very good way in which to test the matter is to remove the earth in the centre of a dry hard road bed to the depth of one foot or eighteen inches. If after complete pulverization the earth is returned, after twenty-four hours have elapsed the pulverized earth in the hole will be found to be quite moist *even to the surface*, while the surrounding soil (not pulverized) will remain dry and hard.

Subsoiling is found to be beneficial, because it deepens the bed of loose open earth, which acting like a sponge draws up the moisture from the under soil and retains it for the use of the growing vegetation.

One great cause that subsoiling is not more popular is that often when it has been tried it has been followed by a moist wet season, and hence the effect is not as visible as during a dry season, although there are other benefits to be derived from subsoiling than that of protection from drought, which tend to make the operation pay, as has been proved by more than one subsoiler.—*Cor. Germantown Telegraph.*

STATE FAIRS FOR 1870.

We give the following list of the times and places of holding State Fairs in the Autumn of 1870.

Illinois.....	Decatur.....	Sept. 26 to Oct. 1
Iowa.....	Keokuk.....	Sept. 13-16
Kansas.....	Fort Scott.....	Sept. 27-30
Minnesota.....	Winona.....	Sept. 20-23
Nebraska.....	Brownville.....	Sept. 20-23
New York.....	Utica.....	Sept. 27-30
Ohio.....	Springfield.....	Sept. 13-16
Ontario (Provin.).....	Toronto.....	Oct. 3-7
St. Louis Assoc'n.....	St. Louis.....	Oct. 3-7
Wisconsin.....	Milwaukee.....	Sept. 27-30
Kentucky.....	Henderson.....	Sept. 4-7
Maryland.....	Baltimore.....	Sept. 27-31
North Carolina.....	Raleigh.....	Oct. 4-7
Georgia.....	Atlanta.....	Oct. 19-26
Pennsylvania.....	Scranton.....	Sept. 27-30
Michigan.....	Jackson.....	Sept. 20-23
Central Michigan.....	Lansing.....	Sept. 14-16
Arkansas.....	Little Rock.....	Oct. 11-14
Vermont.....	Burlington.....	Sept. 6-9
Woolen Exposition.....	Cincinnati.....	Sept. 21 to Oct. 15

TOBACCO FIRING APPARATUS.—We call attention to the advertisement of Messrs. Bibb & Co., Baltimore, offering to the tobacco planters of the country their valuable Firing Apparatus, at very reduced rates. We have heretofore spoken of the value of this machine, and again commend it to growers everywhere.

TO MAKE CIDER.

Pick all the apples, rejecting those not sound, wash them clean, and afterwards let them lie and get dry. Grind and press them, using no water or straw, or any substance that will give the cider an unpleasant taste, as on the purity and cleanliness of the apples depends the quality of the cider. Strain the juice through woolen or other close bag, put into clean barrels, and set in a moderately cool place, keeping the barrel full all the time, so that the impurities may work off at the bung. After it has done fermenting, carefully rack it off, let it stand a few days, and bung it up. As the air tends to sour the cider, it is a good plan to provide a bent tin tube, one end fastened in the bung and the other to drop down into a bucket of water. This will let all the gas off, and not let the air get to the cider. The quicker the pomace is pressed after being ground, the lighter will the color be, and darker if not pressed for twenty-four hours after being ground. The cider from the second and third pressing will be the richest. The reverse is the case in making wine, as a severe pressure on the *must* makes sour wine. Cider making should be conducted with all the care that wine making is.

Most any good sour apple will make cider, but more generally an apple full of juice, and not very good to eat, will make the best. The Virginia crab perhaps excels all other apples for cider making.

When bottled up with a little rock candy, and wired, it will, after standing some time, sparkle like champagne, when opened.

To get cider very strong, expose it in a tub in extremely cold weather, and remove the ice that forms. As this can be only water, it leaves the cider that remains of additional strength.

Any substance put in to arrest the fermentation is of doubtful value, as all good cider must be perfectly fermented to be healthy. You had better depend rather on careful and clean making, and bottle tightly at the proper time.

WINE MAKING.

Pick the grapes off the stems when fully ripe, rejecting bad ones. Pass them through one of the Wine Mills to tear open skins, but not to bruise the pulp. Press moderately; then get all that remains in the must to make brandy or an inferior wine of. Strain and fill into clean barrels; then insert a bent tube tight in the bung, and let the lower (outside) end rest under the surface of water in a bucket, so that while all the gas shall escape, the air will not get to the wine. When it has done fermenting, rack it off into clean barrels, bung it up, and set in a cool place; bottle it in a few months. The great secret of making good wine is to select only the best grapes, and not press out the sour portion of the pulp. Nothing is here said about the numerous mixtures of water, sugar and grape juice, which are frequently connected and sold under the name of wine, but only of the pure juice of the grape, properly fermented.

CANNING FRUIT.

Like many others, I tried, again and again, to seal fruit cans so as to keep the fruit without molding upon the top. I was particular in following the printed directions in general use, but found that my cans, when cold, would not be more than two-thirds full, and in a few days a white mold appeared upon the top. I finally appealed to a friend who, I knew, canned large quantities for her own use.—She showed me fruit over a year old, quite fresh, the cans full, and no mold. I at once adopted her plan which I have since followed with great success. I have no interest in the manufacture of cans, and believe that every one should do his own advertising, but I prefer that kind in which you have only the can, glass cover and rubber to use.

Fruit can be kept just as well without, as with sugar; and those sealed up for pies are better without any, as they will retain their flavor far better. Brass kettles should never be used. Tin pans or kettles lined with porcelain, so as to preserve the most perfect flavor of the fruit, are the best. While my fruit is being scalded, I put a gill of cold water in each can, and fill up with hot water, putting the covers and rubber also into hot water. The fruit need not be cooked—only heated to the boiling point—unless in preparing pears or quinces, or some other hard fruits, that may require more cooking, and then only just so that a straw may be passed through, always being careful to have juice enough to cover the fruit. As soon as boiling hot, empty a can and fill; then another, or as many as can well be attended to. Let the cans stand open until you can comfortably bear the hands upon them. Meanwhile more fruit may be heated.

Cut thick writing paper in round pieces the size of the top of each can, and when the contents of the cans are cooled, slip a piece over the top of the fruit in each can, and at once fill up on top of the paper with boiling juice (saved for the purpose), and put on the covers as soon as filled, according to the directions given.

I often seal up cherries and tomatoes, only for winter use, in one gallon stone jars that are small at the top prepared just the same as for glass. Leave off the covers, seal with melted rosin, adding a little tallow. Try it on a piece of cloth; if too brittle, add more tallow, and *vice versa*. Cut a paper also for the top of the jar, just so it will come over the edge, and dip a piece of thick cloth into the resin, only upon one side, spread over the jar and tie down; now, with a spoon, dip and spread on the hot resin, until entirely covered, pressing down the sides with the hands dipped in cold water. When cold, if the jar is air-tight, the cover will be depressed a quarter of an inch or more. But if it is level, then you must seal it over again. Those who can common sour cherries will find them greatly improved by first draining off all the juice, and then covering them with water—scald and drain off, and cover over again for sealing, canning, preserving, or drying.—*Farm and Fireside*.

Ladies Department.

THE CHILDREN.

BY CHARLES DICKENS.

When the lessons and tasks are all ended,
And the school for the day is dismissed,
And the little ones gather around me,
To bid me good night and be kissed:
Oh, the little white arms that encircle
My neck in a tender embrace!
Oh, the smiles that are halos of heaven,
Shedding sunshine of love on my face!

And when they are gone I sit dreaming
Of my childhood too lovely to last;
Of love that my heart will remember
When it wakes to the pulse of the past;
Ere the world and its wickedness made me
A partner of sorrow and sin;
When the glory of God was about me,
And the glory of gladness within.

Oh, my heart grows weak as a woman's,
And the fountains of feeling will flow,
When I think of the paths steep and stony,
Where the feet of the dear ones must go:
Of the mountains of sin hanging o'er them,
Of the tempest of Fate blowing wild;
Oh! there's nothing on earth half so holy
As the innocent heart of a child.

They are idols of hearts and of households;
They are angels of God in disguise;
His sunlight still sleeps in their tresses,
His glory still gleams in their eyes;
Oh! those truants from home and from heaven,
They have made me more manly and mild,
And I know how Jesus could liken
The Kingdom of God to a child.

I ask not a life for the dear ones
All radiant, as others have done,
But that life may have just enough shadow
To temper the glare of the sun.
I would pray God to guard them from evil,
But my prayer would bound back to myself,
Ah! a seraph may pray for a sinner,
But a sinner must pray for himself.

The twig is so easily bended,
I have banished the rule and the rod;
I have taught them the goodness of knowledge,
They have taught me the goodness of God;
My heart is a dungeon of darkness,
Where I shut them from breaking a rule;
My frown is sufficient correction;
My love is the law of the school.

I shall leave the old house in the autumn,
To traverse its threshold no more;
Ah! how shall I sigh for the dear ones,
That meet me each morn at the door;
I shall miss the "good nights" and the kisses,
And the gush of their innocent glee,
The group on the green, and the flowers
That are brought every morning to me.

I shall miss them at morn and at eve,
Their song in the school and the street;
I shall miss the low hum of their voices,
And the tramp of their delicate feet,
When the lessons and talks are all ended,
And Death says: "The school is dismissed!"
May the little ones gather around me,
To bid me good night, and be kissed!

God made both tears and laughter, and both for kind purposes; for as laughter enables mirth and surprise to breathe freely, so tears enable sorrow to vent itself patiently. Tears hinder sorrow from becoming despair, and laughter is one of the very privileges of reason.

THE WOMAN WHO LINGERS.

She stands on the corner with a squad of female friends, and smiles at the car-driver—at the same time signalling him with her parasol. As soon as he begins to slacken his pace, she opens out in a conversation with her friends. The car stops, and the conductor waits. She glances around at him, steps down from the curbstone, and branches off into a fresh lot of talk. The conductor looks mad. He requests her to hurry up. She rushes at the car, seizes the iron hand rail to make sure that she has got that car all safe and certain, and then she determines that she will have her talk out or perish on the flagstones then and there. She has more last words than the Indian chief who refused to die and go to the happy hunting grounds until he had said the ten commandments and Constitution of the United States, including the fifteenth amendment, backwards, three times, in his native tongue. She holds on to that rail grimly, plants one foot in the step and yells out—

"Give my love to Maria! Tell Arabella she owes me a call! Don't forget to bring William Henry and the children up to tea on Tuesday night! And tell Aunt Sarah I'd have that bombazine dyed black and trimmed with bugles!"

Conductor looks like a man who would commit unjustifiable homicide upon slight provocation. In wrath he pulls the bell; the woman mounts the steps, smiles at her friends, waves her parasol at them; when she has sailed about a hundred yards up the street she calls out:

"Be sure to tell Arabella, and don't let Georgie suck the yellow paint off his mouth-organ!"

When she is seated the conductor waits awhile and then he asks for her fare. She feels in her pocket. Good gracious! she hopes she has not lost her purse. She dives into her satchel; it isn't there. Perhaps the tickets are under her glove; she removes it slowly, but they can't be found. She tries her pocket again, and finds the purse, after all. Conductor looks as indignantly melancholy as an aristocratic undertaker at a funeral, at which there are only four carriages and a yellow pine coffin. She unfolds a bundle of notes slowly, but as she doesn't find the one she wants she puts them back and hunts around her satchel for five minutes for a ten-cent note. Conductor gives her three cents change, and goes out on the platform, where he tears his hair, kicks a newsboy off the step, and tells his sorrowful tale to a passenger who is smoking a cigar. Meanwhile the woman has found an acquaintance, to whom she is talking as briskly as if this was the first chance she had since last summer. She wants to get out at Twentieth street. Conductor stops the car, but the woman, half rising, continues her remarks to her acquaintance. Conductor says: "Please hurry up, ma'am," and then she jumps to her feet, shakes hands with her friend, saying: "Oh, I forgot to ask after John." John is well; but the woman thinks it necessary to offer some sanitary suggestions in reference to John's health, and to declare that she will be abjectly miserable unless Mary Jane brings the twins up to spend the day. More objections on the part of the degraded outcast on the platform. The woman at last starts for the door, and is about to step off, when she misses her purse. She goes back to look for it, moves all the passengers, overturns all the hay, at last finds the purse in her pocket, says, "Good bye, come up and see me," to her friend, and gets out. Conductor rattles a volley of imprecations down the street after her, pulls the strap savagely, and transfers twenty-five cents worth of fares from his business pocket into his own private exchequer as a balm to soothe his lacerated feelings.

Man's love is of man's life a thing, a part,
'Tis Woman's whole existence.

PREPARATION FOR MARRIAGE.

Girls do not reach their maturity until twenty-five, yet at sixteen they are wives and mothers all over this land, robbed of all the rights and freedom of childhood in marriage, crippled in growth and development; the vital forces needed to build up a vigorous and healthy womanhood are sapped and perverted from their legitimate channels in the premature office of reproduction. When the body is overtaxed, the mind loses its tone and settles down in a gloomy discontent that enfeebles the whole moral being. The feeble mother brings forth feeble sons; the sad mother those with morbid appetites. The constant demand of stimulants among men is the result of the morbid conditions of their mothers. Healthy, happy, vigorous womanhood would do more for the cause of temperance than any prohibitory or license laws possibly can. When woman, by the observance of the laws of life and health, is restored to her normal condition, maternity will not be a period of weakness, but of added power. With that high preparation of body and soul to which I have referred, men and women of sound mind and body, drawn together by true sentiments of affection, might calculate with certainty on a happy home, with healthy children gathering round their fireside. To this end let girlhood be as sacredly devoted to education, to mental, moral and physical growth, to as high preparation for personal independence and ambition as boyhood is to-day; remembering that girls, as well as boys, were created primarily for their own enjoyment, and only secondarily to serve each other. Reproduction in the normal condition of woman will not be a period of suffering, but of joy and thanksgiving. One of the saddest features of woman's present condition is that she is cursed of heaven in her motherhood; that it is one of nature's necessities that she should suffer through the period of maternity. It is because we ignorantly violate so many laws of our being that it is so to-day.—*Mrs. E. C. Stanton.*

ADVICE TO GIRLS.—Somebody gives the following advice to girls. It is worth volumes of fiction and sentimentalism:

"Men who are worth having want women for wives. A bundle of gewgaws, bound with a string of flats and quavers, sprinkled with cologne and set in a carmine saucer—this is no help for a man who expects to raise a family of boys on veritable bread and meat. The piano and lace frames are good in their places, and so are ribbons, frills and trinsils; but you cannot make a dinner of the former, nor a bed blanket of the latter; and, awful as such an idea may seem to you, both dinner and bed blankets are necessary to domestic happiness. Life has its realities, as well as fancies; but you make it all decorations, remembering the tassels and curtains, but forgetting the bedstead. Suppose a man of good sense, and of course good prospects, to be looking for a wife, what chance have you to be chosen? You may cap him, or you may trap him, but how much better to make it an object for him to catch you. Render yourself worth catching, and you will need no shrewd mother or brother to help you find a market."

DOMESTIC RECIPES.

BRANDIED PEACHES OR PLUMS.—Gather peaches before they are quite ripe, prick them with a large needle, and rub off the down with a piece of flannel; put them into a preserving pan with cold water enough to cover them, and let the water become gradually scalding hot. If the water does more than simmer very gently, or if the fire be fierce, the fruit will be likely to crack. When they are tender, lift them carefully out and fold them in flannel, or a soft tablecloth, in several folds. Have ready a quart or more, as the peaches require, of the best white brandy, and dissolve ten ounces of powdered sugar in it. When the peaches are cool, put them into a glass jar, and pour the brandy and sugar over them; cover with leather and a bladder. Apricots and plums can be done in the same way.—*Cor. Germantown Tel.*

TOMATO CATSUP.—As it soon will be time to preserve tomatoes and make catsup (ketchup?) the following will be found to give a superior article: Tomatoes, $\frac{1}{2}$ bushel; salt, 6 ounces; allspice, ground, 6 drachms; yellow mustard, ground, 1 ounce $5\frac{1}{2}$ drachms; black pepper, ground, 3 ounces; cloves, ground, 6 drachms; mace, ground, 3 drachms; cayenne pepper, ground, 2 drachms; vinegar, 1 gallon—mix. Cut the tomatoes to pieces; boil and stew in their own liquor until quite soft. Take from the fire, strain and rub through a middling fine hair sieve, so as to get the seeds and shells separated; boil down the pulp and juice to the consistency of apple butter, (very thick), stirring all the time; when thick enough, add the spices, stirred up with the vinegar; boil up twice; remove from the fire; let cool and bottle.—*Druggists' Circular.*

FRUIT JUICES.—The juices of raspberries, pineapples and other fruits, are useful for flavoring ice-cream and similar purposes. The juice can be readily preserved by bottling. Express the juice and put it in bottles; set the bottles in a cold boiler with a board or grating under them to prevent contact with the bottom of the boiler. Heat up the water and continue at the boiling point until the contents of the bottle are heated through. Cork the bottles while hot, seal and keep in a cool place. The bottles should not be so large as to contain more juice than enough to use at once, as it will not keep long after being opened.

PRESERVING STRAWBERRIES, BLACKBERRIES AND RASPBERRIES.—Pick clean, put in a porcelain-lined vessel with one-fourth to one-half the weight of white sugar, and a few spoonfuls of water, just enough at the bottom to prevent burning, as these fruits furnish juice enough. Heat slowly for a few minutes, and as soon as the sugar is dissolved, raise to a boiling heat, and dip carefully into the warm bottle so as not to break the fruit. Keep in a cellar or other pantry not subject to much heat.—*American Agriculturist.*

PRESERVING CURRANTS.—Press and strain the juice out of a quantity of currants. Then take, say, eight pounds of fresh, stemmed fruit, and put with it a quart of this juice and ten pounds of sugar. (A pound or two of raisins improves the flavor.) Cook the whole well, boiling it half an hour or so. Then bottle. This is a pleasant sweetmeat. When desired for eating with meats, some add a little vinegar and spices with the sugar. Bottle as above described.—*Ibid.*

WHORTLEBERRIES.—Prepare the same as strawberries, except that more water will be needed.—*Ibid.*

CURRENT ICE.—To one pint of currant juice, obtained by squeezing the berries through a piece of flannel, add one quart of water and two pounds of sugar. Beat to a froth the whites of four eggs, and stir into the juice, just before it is placed in the freezer. Beat it well in with the ice cream beater, and it will freeze in a bright pink froth. Grate a cocoanut, mix it with sugar, and serve in the same saucer with the currant ice. The contrast is attractive, the taste unequalled by any similar confection.

HOW TO MAKE CUTTINGS GROW.

It has been ascertained that a cutting will develop roots much sooner in moist sand than in rich soil. But the sand cannot maintain its growth for any length of time. To prepare pots for raising cuttings they should be filled nearly to the brim with rich garden loam—dark and porous, not clayey and soggy; then pour in one inch in depth of scouring sand—sea sand will do as well as the yellow sand. Wet this thoroughly, and place the cutting, from which all but the three or four upper leaves have been removed, close to the side of the pot; the contact of the ware against the stem of the cutting promotes its growth. Press the wet sand firmly around the tiny stem. A great deal of your chance for success in raising slips or cuttings depends upon this. Plant as many cuttings as the pot will hold, from six to a dozen, according to the size of your pot; when they are firmly set in the sand, two or three can be inserted in the middle of the pot. Set them away in a dark, warm place for twenty-four or thirty-six hours. Thus, cuttings will grow quickly in a hot bed, because the temperature is not dry. Their growth depends a great deal upon light, heat and moisture. If a bud is close at the base of a cutting, it will strike root more easily—is not so apt to decay. The roots shoot from a bud, and the lower down it is the surer your success. When the leaves drop, the plant is commencing to grow; if they wither on the stem, it has begun to decay. By following these directions no one can fail to grow all kinds of house plants. Roses and all the rarest flowers of the green houses are propagated in this manner.—*N. E. Farmer.*

A NEW WAY TO DRY PEACHES.—Dr. Jos. Treat, of Vineland, N. J., gave last season the following, and, as he says, new directions for paring peaches for drying:

"Never pare peaches to dry. Let them get mellow enough to be in good eating condition, put them in boiling water for a moment or two, and the skins will come off like a charm. Let them be in the water long enough, but no longer. The gain is at least six-fold—saving of time in removing the skin, great saving of the peach, part of the peach saved, the best part, less time to stone the peaches, less time to dry them, and better when dried. A whole bushel can be done in a boiler at once, and then the water turned off. This very morning we had over two bushels skinned, stoned (halved), and on the boards, long before a quarter of them could even have been peeled."

The Maryland Farmer, \$1.50 per annum.

HOW TO TREAT KICKING COWS.—A friend told us the other day, says the *Utica Herald*, of a method of treatment that he had found successful in curing cows of the habit of kicking while being milked. It is as follows: As the cow stands in the stanchion, he puts a bull-ring in her nose, throws the rope attached to the ring over a beam or girt above the head of the cow, and drawing her head as high as possible without raising her feet from the floor, makes fast the end of the rope. The cow cannot kick while standing in this strained position, and the milking process is then conducted gently and rapidly. As soon as she learns that she has nothing to fear from the milker, but everything to fear from the ring—and this knowledge she is said to acquire rapidly—she is cured of her disagreeable habit. A young heifer may often be thus cured by a single application.

TOP DRESSING MEADOWS.—An agricultural correspondent, Mr. D. R. Sperry, of the *Chicago Tribune*, says:

"The best time to top-dress the meadow is immediately after the crop of hay is taken off, more especially in a dry season like the present. But then we do not always know the time to do the work. In that case the winter will answer a good purpose. Last winter I top-dressed several acres, hauling out the manure from the stable once or twice a week.

The result is two to two and a half tons of hay to the acre, against less than half the amount on that not thus treated. Then again, the hay is early, the last going into the barn and stack yesterday. I shall expect a heavy after-math for soiling during October and November. Ten acres of meadow top-dressed will turn more hay than twenty without it. Will owners of small farms please make a note of this?"

SALT AND LIME.—A contributor to the *Country Gentleman* writes: My own experience teaches me to use salt and lime mixed, five bushels of the former to 100 of the latter; that is about the quantity per acre on sandy soil. Never use salt on land inclined to work heavy. Apply the salt and lime to the sod before sowing wheat. I have never used lime on sod. From experiments with various manures, I prefer nitrate of soda or nitrate of potash or grass or clover, 1½ cwt. per acre applied in the spring just as they commence growth.

The lady principal of a school, in her advertisement, mentioned her lady assistant, and the "reputation which she bears;" but the printer left out the word "which," so the advertisement went forth commending the lady's "reputation for teaching she bears."

New Advertisements.

Dugdale & Girvin.....	Baugh's Raw Bone Phosphate
Maryland Fertilizing and Manufacturing Co.....	Ammoniated Superphosphate.
J. J. Turner & Co.....	"Excelsior," No. 1 Peruvian Guano and Soluble Phos- phate—Ammoniated Bone Super-Phosphate.
Thomas Norris & Son.....	Cider Presses and Drills.
E. G. Edwards.....	Whann's Raw Bone Super- Phosphate.
P. H. Dederick & Co.....	Hay and Cotton Presses.
R. H. Allen & Co.....	Grain Drills and Sowers.
James Vick.....	Illustrated Catalogue.
Lister Brothers.....	Bone Flour, Ground Bone, Bone Meal.
The Colwells, Shaw & Will- ard Mfg Co.....	Tin Lined Lead Pipe.
J. W. & M. Irwin.....	Chester Pigs, Sheep, &c.
Thomas Meehan.....	Maple and Arbor Vita. Osage Orange, &c.
Geo. B. Hickman.....	Chester White Pigs.
F. K. Phenix.....	Bloomington Nursery.
Henry Bower.....	Complete Manure.

U. S. Stamp Duties

For Agreement or Contract, or renewal of same on each sheet.....	\$0 05
Bank Check, for whatever amount.....	0 02
Bill of Lading to foreign ports, except British North America.....	0 10
Bond of Indemnity, each \$1,000 or part.....	0 50
Bond for executing Duties of any office.....	1 00
Certificate of Stock.....	0 25
Certificate of Deposit, not exceeding \$100.....	0 02
do, exceeding \$100.....	0 05
Certificate (Marriage).....	0 05
Deeds or Mortgages, or other conveyances of Real Estate, not exceeding \$500.....	0 50
do, exceeding \$500 and not exceeding \$1,000.....	1 00
do, exceeding \$1,000, for every \$500 or fraction- al part thereof.....	0 50
Draft or Order at sight.....	0 02
Draft, not at sight, for each \$100 or part.....	0 05
Lease, or Assignment of same, not over \$300.....	0 50
Lease above \$300, for each additional \$200 or part.....	50
Mortgage, or Assignment of same, over \$100 and not over \$500.....	0 50
Mortgages, for each additional \$500 or part.....	0 50
Notes, for each \$100 or part.....	0 05
Receipt, for \$20 and over.....	0 02
Power of Attorney, to sell stock or collect divi- dend or interest thereon.....	0 25
Power to sell or rent Real Estate.....	1 00
Power to collect Rents.....	0 25
Protest of Note or Draft.....	25

Tin-Lined Lead Pipe is a Block-Tin Pipe heavily coated with solid lead. The metals are so thoroughly united in the process of manufacture as to be, in fact, but one pipe. Tin is a metal closely resembling silver, both in color and purity; hence water flows through tin-lined lead pipe as pure as if drawn through silver. It is as flexible and as easily worked as lead pipe; it is also stronger and more durable, and costs about the same per foot. By its use lead water poison and iron rust are avoided, and general health promoted. Circulars and sample of pipe sent by mail free. Address the COLWELLS, SHAW & WIL-
LARD MANUFACTURING COMP'Y, 213 Centre Street, N. Y.

No HUMBUG.—We do not wish to inform you, reader, that Dr. Wonderful, or any other man, has discovered a remedy that cures all diseases of mind, body or estate, and is designed to make our sublunary sphere a blissful Paradise, to which Heaven itself shall be but a side show, but we do wish to inform you that Dr. Sage's Catarrh Remedy has cured thousands of cases of catarrh in its worst forms and states, and the proprietor will pay \$500 for a case of this loathsome disease that he cannot cure. It may be procured by mail for sixty cents, by addressing R. V. Pierce, M. D., Buffalo, N. Y. Sold by druggists.

Dr. Pierce's Alt. Ext. or Golden Medical Discovery cures Bronchial, Throat and Lung diseases.

THE LIVE STOCK JOURNAL.—We have received the 2d number of this monthly, published in Buffalo, New York, by Henry Springer & Co., at \$1.50 per annum. It contains in each number 24 3-column quarto pages—neat in its typography and ably conducted.

The Household.—Devoted to the interests of the American Household. Brattleboro, Vt., George E. Crowell, editor; \$1 per year. We advise our lady readers to send that dollar and get five times its value.

The Little Corporal—for Boys and Girls—appears in a new form; is a capital paper for the young, and they should subscribe by sending \$1 to Sewell & Miller, Chicago, Illinois. Do it.

The Herald of Health.—This is a Journal of Physical Culture; published monthly by Wood & Holbrook, New York, at \$2 per annum, and well worth it, as all will find who subscribe.

Tilton's Journal of Horticulture.—This elegant monthly is now in its fourth year. It is conducted with great ability, and its typography unexcelled. Boston: J. E. Tilton & Co.; \$3 per year.

GOOD HEALTH.—A popular Journal on the Laws of Correct Living. Alexander Moore, publisher, Boston, Mass. price \$2 per annum—3 copies \$5. It is the only work of its class—being a vehicle of instruction to the people, giving lessons of correct living, as developed by medical science. Its teachings are acknowledged to be the most reliable of any journal in the country, treating upon kindred topics.

A LARGE GRAIN GROWER.—Mr. Thomas Sudler, of Potato Neck, says the *Somerset Herald*, is the largest grain producer in this county. He has threshed two thousand bushels of wheat this year, and nine hundred bushels of oats.

TO KEEP ICE.—*Bell's Messenger* says: Make a double pocket of strong woolen cloth, no matter how coarse and faded it is. Have a space of two inches or so between the inner and outer pockets, and pack this space as full as possible with feathers. You have no need to use geese feathers; hens' feathers are just as good. With a pocket thus constructed and kept tightly closed at the mouth, a few pounds of ice may be kept a week. This may often be convenient where ice is to be kept for a sick room.

WOODPECKERS, and all the family, are most useful birds. The borer stands but little chance where they have undisturbed access. They penetrate through both bark and wood and destroy this and other pests.

WOMAN—As the dew lies longest and produces most fertility in the shade, so woman, in the shade of domestic retirement, sheds around her path richer and more permanent blessings than man, who is more exposed to the glare and observation of public life.

It is advisable, in the construction of poultry houses, to use pine lumber; the more pitch it contains the better, as this is offensive to poultry vermin.

A HORTICULTURIST thinks that the cause of the bark of young fruit trees splitting is allowing manure to lie close around the bark of the tree for some distance up from the ground.